NORMAN ROCKWELL, PHOTOGRAPHER P. 8 • A COMET'S TALE P. 12

Smithsonian

DECEMBER 2009

SMITHSONIAN.COM

Stolen Wildlife

The illicit animal trade is surpassed only by drugs and weapons trafficking

ALSO

MOUNTAIN MONKEYS

BOSNIAN PYRAMIDS

CELEBRATING HANDEL'S *MESSIAH*

ARTISTS' HO-HO HOMEMADE CARDS

MEXICO'S CITY OF ANGELS

HOW AMERICA GOT ITS NAME

Dear Subaru,

"As our friends waved us off, my new husband and I jumped in our not-so-new Subaru. I would've felt silly wasting money on a car and a driver to take us 12 miles home. I enjoyed driving off in our own car. I wouldn't have it any other way." -RuthAnn D., Kennett Square, PA. **Love. It's what makes a Subaru, a Subaru.**

SUBARU

Tell your story at subaru.com/dearsubaru

No camera will store
as much as your heart.

Osa Peninsula

COSTA RICA
No Artificial Ingredients
www.visitcostarica.com
1-866-COSTARICA

TODAY
Thinking green

TOMORROW
Planning for blue

TOYOTA

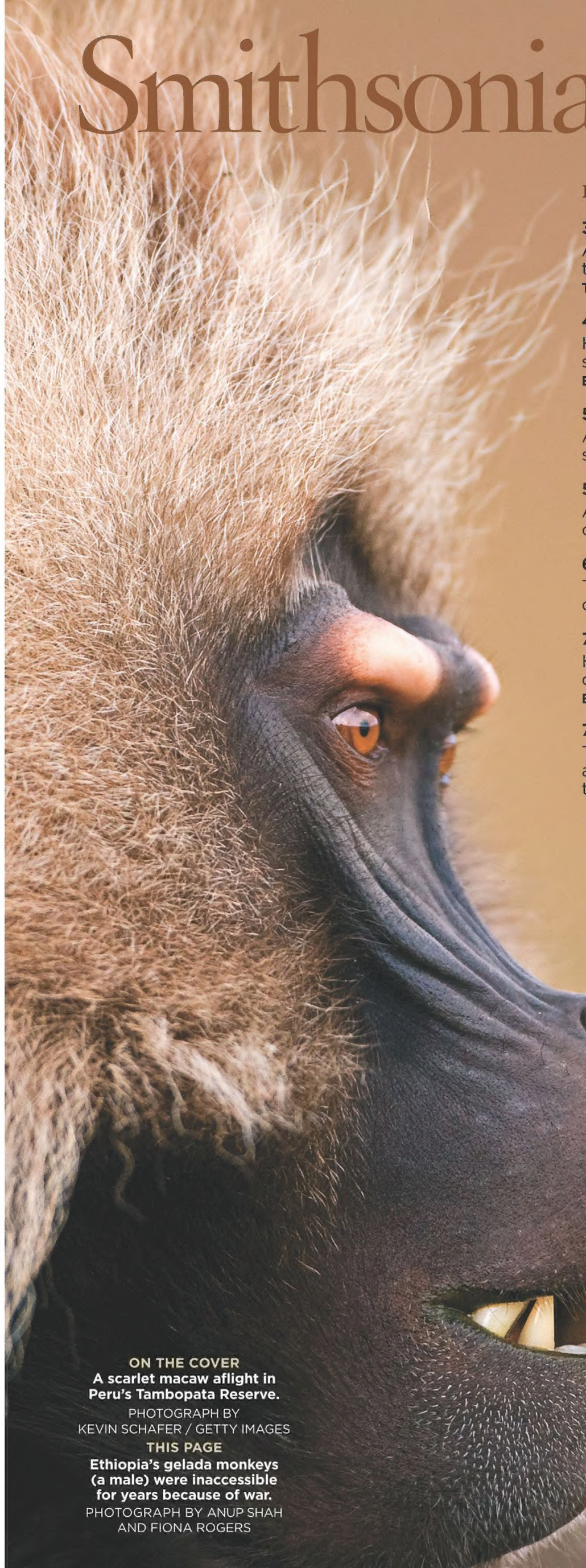
toyota.com/future

Can today's environmental thinking inspire tomorrow's technology? Toyota believes so. Since its launch, the Prius has earned the love of millions of forward-thinking drivers. We estimate our hybrid technology has saved a billion gallons of gas and lowered CO_2 emissions by billions of pounds.* It's also paving the way for the next generation of environmental vehicles. Like cars charged at home. Or cars that will run solely on electricity, or consume hydrogen and emit only water. Because when it comes to thinking green, the sky's the limit.

*Estimated savings compares each U.S. hybrid vehicle's EPA combined mpg rating with its segment average based on latest EPA Trends Report (driven 15,000 miles annually). Actual mileage will vary. ©2009

Smithsonian contents

DECEMBER 2009 · VOLUME 40, NUMBER 9



ON THE COVER
A scarlet macaw aflight in Peru's Tambopata Reserve.
PHOTOGRAPH BY KEVIN SCHAFER / GETTY IMAGES

THIS PAGE
Ethiopia's gelada monkeys (a male) were inaccessible for years because of war.
PHOTOGRAPH BY ANUP SHAH AND FIONA ROGERS

FEATURES

34 Wildlife Trafficking
A reporter follows the lucrative, illicit and heartrending trade in wild animals deep into Ecuador's rain forest
TEXT AND PHOTOGRAPHS BY CHARLES BERGMAN

42 Hallelujah
Handel's *Messiah*, a musical rite of the holiday season, still awes listeners 250 years after the composer's death
BY JONATHAN KANDELL

50 The Pyramid Man
Ancient pyramids in Bosnia? An amateur archaeologist says yes. Many experts say no way **BY COLIN WOODARD**

58 Glee Mail
Artists put their own stamp on the holidays with handmade cards, on display in a new exhibit **BY ABBY CALLARD**

62 Savoring Puebla
The novelist finds everything about the Mexican colonial city to her liking, especially the cuisine **BY FRANCINE PROSE**

72 Ethiopia's Exotic Monkeys
High in the Simien Mountains, researchers are getting a close-up look at an exotic, socially adventuresome primate
BY ABIGAIL TUCKER PHOTOGRAPHS BY ANUP SHAH AND FIONA ROGERS

78 Putting America on the Map
Two obscure 16th-century German scholars not only named a continent but also changed the way people thought about the world **BY TOBY LESTER**

DEPARTMENTS

3 From the Editor MAKING TRACKS

8 Indelible Images MR. ROCKWELL'S NEIGHBORHOOD
A new book offers a revealing look at how the artist created his homey illustrations
BY RICHARD B. WOODWARD

12 Phenomena COSMIC HARVEST
Dust captured by a spacecraft from a comet's tail holds clues to the origin of the universe
BY ROBERT IRION

4 Letters
COUNTERFEIT DRUGS

6 Wild Things
NAVIGATING BUTTERFLIES

19 Around the Mall ROMANCE AT SEA
20 FROM THE CASTLE OUR PLAN
24 OBJECT AT HAND SPECIAL DELIVERY
26 Q & A WILLIAM T. WILEY
28 WHAT'S UP CAMERAS THROUGH TIME

30 This Month in History
GONE WITH THE WIND

32 Your Smithsonian.com
ROCK PORT, MISSOURI

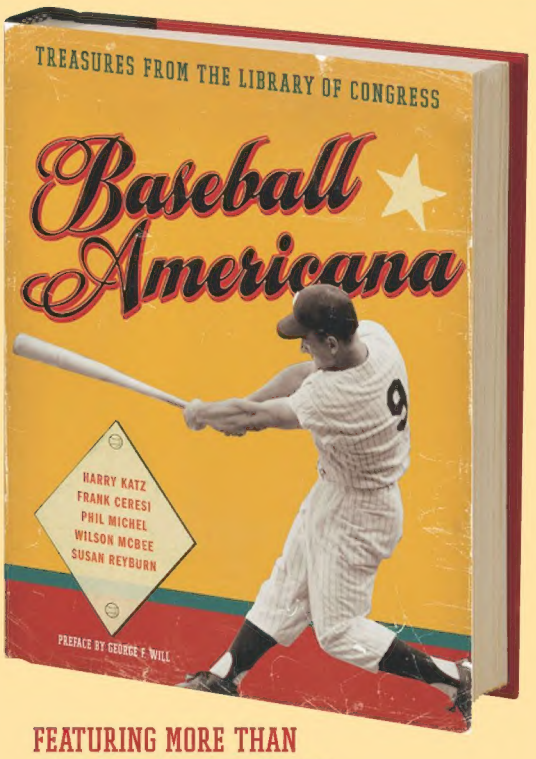
100 The Last Page
SHOPPING MAUL

VISIT SMITHSONIAN.COM
WANT MORE? PLEASE VISIT THE MAGAZINE'S WEB SITE TO EXPLORE NEW ARTICLES, PHOTOGRAPHS, VIDEOS, BLOGS AND MANY OTHER INTERACTIVE FEATURES.

SMITHSONIAN PRESENTS

THE PERFECT GIFT FOR EVERY BASEBALL FAN!

A LAVISHLY ILLUSTRATED HISTORY OF AMERICA'S FAVORITE SPORT



FEATURING MORE THAN 350 FABULOUS ILLUSTRATIONS SOME NEVER BEFORE PUBLISHED!

"[A] sumptuous book." —George Will

"There are enough coffee table books about baseball to clutter every piece of furniture in every Starbucks in the country... *Baseball Americana* is able to stand out.... The result is a journey that shows how the game has influenced American culture—pop and otherwise."
—*Sports Illustrated*

AVAILABLE AT SMITHSONIANSTORE.COM, BY CALLING 1-800-322-0344, OR WHEREVER BOOKS ARE SOLD.

Smithsonian Books

Smithsonian Smithsonian.com

EDITOR
Carey Winfrey

ART DIRECTOR
Maria G. Keehan

EXECUTIVE EDITOR
Terence Monmaney

WEB EDITOR
Maura McCarthy

MANAGING EDITOR
Alison C. McLean

SENIOR EDITORS
Kathleen M. Burke
T. A. Frail
Laura Helmuth
Mark Strauss

CONTRIBUTING EDITOR
Robert M. Poole

SENIOR PHOTO EDITOR
Bonnie Stutski

COPY CHIEF
Karen Larkins

***GO SMITHSONIAN* EDITOR**
Beth Py-Lieberman

STAFF WRITER
Abigail Tucker

ASSOCIATE EDITORS
Lyn Garrity
Bruce Hathaway
Marian Smith Holmes
Lucinda Moore

ASSOCIATE ART DIRECTOR
Erik K. Washam

PHOTO EDITOR
Molly Roberts

ASSOCIATE PHOTO EDITOR
Brendan McCabe

ASSOCIATE WEB EDITOR
Brian Wolly

COPY EDITOR
Jeanne Maglaty

ASSISTANT EDITORS
Amanda Bensen
Sarah Zielinski

WEB PRODUCER
Ryan R. Reed

ART SERVICES COORDINATOR
Jeff Campagna

ASSISTANT TO THE EDITOR
Andrea Georgiou

EDITORIAL ASSISTANTS
Megan Gambino
Jesse Rhodes
Michelle L. Strange

READER SERVICES
Karla A. Henry
Carolyn McGhee

INTERN
Abby Callard

WEB INTERN
Audrey Reinhardt

EDITORIAL OFFICES:
MRC 513,
Washington, D.C. 20013-7012
(202) 633-6090

SUBSCRIPTIONS:
(800) 766-2149
P.O. Box 420312
Palm Coast, FL 32142-0312
Smithsonian.com
Outside the United States:
(386) 447-2721

Views expressed by individual authors do not necessarily represent those of the Smithsonian Institution.

Sorry, but SMITHSONIAN cannot assume responsibility for unsolicited materials.

SMITHSONIAN ENTERPRISES
Thomas Ott, **PRESIDENT**

DIRECTOR, SMITHSONIAN MEDIA
Thomas Ott

EXECUTIVE ASSISTANT TO THE DIRECTOR
James A. Babcock

GENERAL MANAGER
Alan Chu

GROUP PUBLISHER
Kerry Bianchi

ASSOCIATE PUBLISHER, MARKETING AND SALES DEVELOPMENT
Rosie Walker

ADVERTISING
Marilyn Cruz, **ADVERTISING SERVICES MANAGER**

ACCOUNT MANAGERS
NEW YORK: James F. Else, **REGIONAL SALES DIRECTOR,** Meryle Lowenthal, Lori D. Scelzi, Blythe Graham-Jones
MIDWEST: Bill Milligan, Jeff Orr **DETROIT:** Colleen Maiorana
SOUTHWEST: Steve Moynihan, Lindsay Davis **SOUTHEAST:** Kelly Hediger, Lisa Herlan **WEST COAST:** Kate Knox, Charles Carroll
CARIBBEAN / CENTRAL AMERICA: Al Nadal
MEXICO: Elsie Mendez Enriquez **CANADA:** Richard Brown, Cindy Ratych, David Seaberg, Greg M. Smith
JAPAN: Yoshinori Ikeda, Shigenori Nagatomo
THAILAND: Yvan Van Outrive, Ja Pipatra **KOREA:** S.S. Song
DIRECT RESPONSE: MI Media Services, LLC, Marie Isabelle
INTERACTIVE AD OPERATIONS COORDINATOR: Joel Newman

MARKETING/RESEARCH
Natalie Thompson, **ASSOCIATE ART DIRECTOR**
Laurie A. Corson, **ASSOCIATE MARKETING DIRECTOR**
Caitlin McCarthy, **ASSOCIATE MARKETING MANAGER**
Elizabeth Stoll, **PROMOTIONS COORDINATOR**
Marilyn Resciniti, **RESEARCH MANAGER**

CONSUMER MARKETING
Lisa Dunham, **CONSUMER MARKETING DIRECTOR**
Mary Ramsey, **PLANNING DIRECTOR**
Andrea Sole, **FULFILLMENT DIRECTOR**
Susan Warner, **RENEWALS AND GIFT DIRECTOR**
Grace Riker, **PURCHASING AND OPERATIONS MANAGER**
Lori Paldino, **NEW BUSINESS DIRECTOR**
Jonathan Balangon, **GIFT MANAGER**
Laura E. Vichick, **ASSOCIATE NEW BUSINESS MANAGER**
Piper Miles-Coccaro, **RENEWALS MARKETING COORDINATOR**

ONLINE PUBLISHING GROUP
Michelle McMahon, **DIRECTOR, INTERNET STRATEGY AND OPERATIONS**
Jennifer L. Bock, **MANAGER, ONLINE MARKETING AND ANALYSIS**
Bilikya Schiller, **SENIOR WEB DESIGNER**
Damie B. Malone, Tony Rosenberger, **WEB DEVELOPERS**
Kelly Durkin, **SENIOR WEB PRODUCER**
Cheryl Carlin, **JUNIOR WEB PRODUCER**

MANUFACTURING
Sarah Kingsley, **DIRECTOR**
Katherine Balch, **PREPRESS DIRECTOR**
Frank Matthew Hale II, **PREPRESS MANAGER**
Marie Koller, **PREPRESS MANAGER**
Stanley Boone, **COLOR AND QUALITY MANAGER**
Penie Atherton-Hunt, **AD SERVICES MANAGER**

BUSINESS OFFICE
Ed Dequina, **BUSINESS MANAGER**
Joanne Hubbard, **ACCOUNTANT**

HUMAN RESOURCES
Dana S. Moreland, **DIRECTOR**
Jennifer N. Alexander, **BUSINESS PARTNER**
Sibyl A. Williams, **HR COORDINATOR**
Jay Sharp, **RECRUITER**

MAIN ADVERTISING OFFICE:
420 Lexington Avenue, Suite 2335
New York, NY 10170
(212) 916-1300

FROM THE EDITOR

Making Tracks

For reliable sources and mole poblano **BY CAREY WINFREY**

"IT'S LIKE AN OPEN SECRET," Charles Bergman says about the subject of our cover story ("Wildlife Trafficking," p. 34). "Nobody talks about it very much. But it seems to be everywhere." Even so, tracking the traffickers was no day at an Ecuadorean beach. "There just wasn't anybody I could call up and say how should I go about finding people in the backcountry. I really had to do it myself, one step at a time, to get deeper into the jungle and see what's really going on." Bergman, who teaches literature and creative writing at Pacific Lutheran University in Tacoma, Washington, first got interested in the problem as a Fulbright scholar in Ecuador in 2006-2007, where he spent many months in that country's rain forests before continuing his research in Brazil, Guyana and Mexico. "This is a large problem," he says, "and we need to start paying more attention to it. It's a problem that people know about but haven't really prioritized. All the local folks I met on the ground just feel they need some sort of larger commitment to help them rehabilitate animals that have been confiscated and also a commitment to regulate the illegal trade."

Bergman: "It seems to be everywhere."

FRANCINE PROSE HAS GREAT RANGE. The author of several well-received novels—including *Blue Angel*, which was a finalist for the National Book Award—she also writes about art, travel and, as she puts it, "whatever sort of grabs my interest at the moment." Her most recent book is *Anne Frank: The Book, the Life, the Afterlife*, which makes a persuasive case for Anne Frank's diary as an artistic, as well as human, triumph. For SMITHSONIAN, Prose has written about the artist Caravaggio and the less-visited western coast of Japan, where tradition prevails. For this issue, she reports on her favorite Mexican city ("Savoring Puebla," p. 62), home to one side of her daughter-in-law's family and the place where Prose's granddaughter, Emilia, was baptized in the summer of 2008. Prose arrived having heard that Puebla has the best food in Mexico. "And it really does," she says. "It's extraordinary. And I didn't know how beautiful the city is—the culture and the architecture. I was thrilled." Prose enjoyed just walking around Puebla's streets or wandering in the *zócalo*—the town's central plaza. "It's one of the most beautiful and relaxing public places of any I've visited in Mexico. You're surrounded by these gorgeous colonial churches and architecture, and then they're selling SpongeBob SquarePants balloons. It's a great place to hang out."

MATTHEW SCHMITZ

NOW ON

Smithsonian.com

Issue Extras

BEST WISHES

View dozens of holiday cards designed by famous and lesser-known artists for their personal use—all collected by the Smithsonian Archives Center—at **Smithsonian.com/cards**

SEX OFF THE BEACH

How do coral reefs reproduce? See breathtaking underwater footage of the great event off Panama's coast at **Smithsonian.com/reefs**

Web Exclusives

CHARM CITY RATS

Read about the cunning and quirky lives of urban rats as revealed in long-term studies by public health experts in Baltimore at **Smithsonian.com/rats**

THE END WAS NEAR

Keeping in mind the dire predictions that have been made for 2012 and that are the basis for the new movie *2012*, discover the recurring history of failed apocalyptic prophesies at **Smithsonian.com/apocalypse**

WORLD WAR II TIME CAPSULE

More than 60 years after he wrote about serving in a racially segregated Army unit in World War II, James Daugherty has published his memoir. Learn more about one of the storied "Buffalo Soldiers" at **Smithsonian.com/daugherty**

STAY CONNECTED:
Sign up for regular e-mail updates at
Smithsonian.com/newsletter

ARCHIVES OF AMERICAN ART, SI

A holiday card, c. 1965, by artist Werner Drewes.

LETTERS READERS RESPOND TO THE **OCTOBER** ISSUE

"Prescription for Murder" paints a frightening picture of the human toll taken by counterfeit drugs. Congress must keep this in mind as it debates drug importation laws and allocates funds for more rigorous enforcement. Some counterfeits are so well designed they escape notice by even the most astute health professionals.

LYNNAE MAHANEY, BETHESDA, MARYLAND

FAKE MEDICINE

I READ "Prescription for Murder" with great interest. During my first week this year as a visiting ear specialist in Jos, Nigeria, I saw at least six teenagers or young adults with permanent, total deafness of recent onset. Each case occurred after they had taken antibiotics. The prescribed drugs were not associated with hearing loss, and my western colleague and I suspected that cheaper, more toxic medication had been substituted. The problem may be widespread, as our Nigerian colleagues were surprised to learn that acquired deafness in young people is extremely rare in the United States.

DOUGLAS R. MYERS, M.D.
VANCOUVER, WASHINGTON

JOHN BROWN'S ALLIES

WHAT CAUGHT MY EYE in "Day of Reckoning," about John Brown and his 1859 raid on Harpers Ferry, was the reference to John Copeland, an African-American student at Oberlin College who participated in the raid. Around 1940, while engaged in an audit of Oberlin College, I took the time to review its well-preserved historical records and found a letter from John Brown in his own handwriting to Levi Burnell, then secretary and treasurer of the institution. Oberlin was also a stop along the Underground Railroad that helped slaves flee to freedom.

GEORGE HEIDEMAN
LIGONIER, PENNSYLVANIA

CURIOUSLY, "Day of Reckoning" neglected to mention by name one black man who rode with Brown: Shields Green. An escaped South Carolina slave, Green was introduced to Brown by Frederick Douglass, who spoke respectfully of Green. "[He] was not one to shrink from hardships or dangers," wrote Douglass. "He was a man of few words, and his speech was singularly broken; but his courage and self-respect made him quite a dignified character." That dignity was unshaken as Green faced trial and death following the raid. Douglass recalled that after he had heard Brown's plan and failed to talk him out of it, he turned to go and asked Green if he was leaving with him. Douglass was surprised, he wrote, "by his coolly saying, in his broken way, 'I b'leve I'll go wid de ole man.'" A monument honoring Oberlinians Copeland and Lewis Leary, whose widow would later become Langston Hughes' grandmother, as well as co-conspirator Green, stands today in Oberlin's Martin Luther King Park.

HERB BOYD
NEW YORK CITY

EACH WEEK in Harpers Ferry I pass by the firehouse where Brown holed up, the courthouse where he was tried and the house beside which he was hanged. He may always remain an enigma, but his cause was just, though his methods were perverse.

ROBERT BAUER
HARPERS FERRY, WEST VIRGINIA

NOT JUST FOR COPS

AS A RETIRED TEACHER, I predict we will see Amy Herman's use of art to teach observation techniques ["Teaching Cops to See"] applied to classroom education, even at the elementary school level. Why delay developing sharper observation skills until adults are established in a profession? This could benefit children both by maximizing their learning and by helping them develop a heightened awareness of their surroundings.

ELLEN BECKER
PEKIN, ILLINOIS

TERMINAL JARGON

YOUR COMMENTARY on the secret language of doctors and nurses ["UBI in the Knife and Gun Club"] left out one expression particularly relevant as we debate health care reform: "There was little we could do because the patient was BCN," or Blue Cross negative.

STEVE RINGHOFF
MODESTO, CALIFORNIA

CORRECTION:

The bird pictured on page 60 was mistakenly identified as a red knot. It is a short-billed dowitcher.

Please send letters to **LettersEd@si.edu** or to **Letters, Smithsonian, MRC 513, P.O. Box 37012, Washington, D.C. 20013.** Include a telephone number and address. Letters may be edited for clarity or space. Because of the high volume of mail we receive, we cannot respond to all letters. Send queries about the Smithsonian Institution to info@si.edu or to VIARC, Public Inquiry Mail Service, P.O. Box 37012, Washington, D.C. 20013.

Julie and Bob S. are connoisseurs of antiques. But, more than that, they are collectors of stories.

The antiques they find tell the stories of people all over the country, and shed light on links to their personal heritage. These stories are what drive Julie and Bob to search far and wide for these hidden treasures. That's what brought them to this lovely antique store in historic Savannah that they discovered on Gozaic.com – a Web site supported by the *National Trust for Historic Preservation*. They planned an entire itinerary filled with activities and places to go to experience more of what enriches their lives. And that's a great beginning to their latest story!

Learn more about Julie and Bob's trips and create your own stories at www.gozaic.com/JulieandBob

gozaic℠

Connecting Through
Places That Matter

WILD THINGS

LIFE AS WE KNOW IT

BY AMANDA BENSEN, ABBY CALLARD, T.A. FRAIL, ABIGAIL TUCKER AND SARAH ZIELINSKI

COLDBLOODED DEVOTION

Like most reptiles, alligators tend to live a solitary existence. But during spring mating season, according to research conducted in Louisiana, they appear to resume long-term relationships. A ten-year genetic study of adults and offspring revealed that even though males and females often mated with multiple partners during any given season, many pairs reunited year after year.

GLOWING MUSHROOMS

Scientists have identified seven new types of luminescent mushrooms (right: in light and dark). The work, from Brazil, Japan and five other countries, ups the number of known species of glowing fungi to 71. Researchers speculate that the chemically produced light attracts nocturnal animals, who disperse the fungi's spores.

BUTTERFLY GPS

Migratory monarch butterflies travel great distances by orienting themselves to the sun at any time of day. Now University of Massachusetts scientists say the insect's antennae are the key to navigation; when the scientists removed or painted them to block sunlight, monarchs lost their way. The surprise? Antennae aren't just for detecting scents after all.

SERIOUSLY SILLY

We aren't the only animals to make fools of ourselves mugging and cooing for infants. Scientists at the National Institutes of Health say rhesus macaques interact with babies in a similar fashion, smacking their lips and making prolonged eye contact. Goofy or exaggerated expressions may serve a similar purpose in monkeys and people: helping the young learn to communicate.

Watch the rhesus macaques at Smithsonian.com/WildThings

Observed

NAME: The great tit (*Parus major*), a sparrow-size songbird widely distributed in Europe and parts of Asia.

IN THE FIELD: Is a lively backyard visitor, with bright colors and a multiplicity of songs.

IN THE CAVE: Becomes a pillaging bat predator.

UNDER STUDY: The bird goes bat hunting when seeds and insects become scarce, usually in late winter, notes a study led by the Max Planck Institute in Seewiesen, Germany. Then it's ambush time. Researchers watched great tits enter a Hungarian cave where common pipistrelle bats (above right) were hibernating and haul the inch-and-a-half-long animals out. The researchers call it a "surprising innovation" during a food shortage.

WAYNE BENNETT / CORBIS; CASSIUS V. STEVANI / CHEMISTRY INSTITUTE, UNIVERSITY OF SAO PAULO (2); THORSTEN MILSE / ROBERT HARDING PICTURE LIBRARY LTD / ALAMY; CORBIS / PHOTOLIBRARY; WIM KLOMP / FOTO NATURA / MINDEN PICTURES; KIM TAYLOR / NATUREPL.COM

Solutions for The Retirement Red Zone®

If you're in or near **The Retirement Red Zone**—the critical years before and after you retire—nothing's more important than making sure your savings lasts a lifetime. Discover how our annuity strategies can guarantee a retirement income stream for as long as you live, no matter what the market does.

TALK to your financial professional.

VISIT RetirementRedZone.com/protect39 to watch a short video.

Prudential

Before investing, consider the investment objectives, risks, charges and expenses of the annuity and its investment options. Ask your financial professional for a free prospectus containing this information. Read it carefully.
Annuity contracts contain exclusions, limitations, reductions of benefits and terms for keeping them in force. Annuities are subject to investment risk. Your principal value may decline.

© 2009. Prudential Financial. Variable Annuities are suitable for long-term investing. Issued by Pruco Life Insurance Company (in New York, by Pruco Life Insurance Company of New Jersey), Newark, NJ, or by Prudential Annuities Life Assurance Corporation, Shelton, CT. All are distributed by Prudential Annuities Distributors, Inc., Shelton, CT. All are Prudential Financial companies and each is solely responsible for its own financial condition and contractual obligations. All guarantees are backed by the claims-paying ability of the issuing company. Variable annuities are available at an annual cost of 0.65% to 1.65% for mortality, expense and administration fees, with an additional fee related to the professional investment options.

ANNUITIES:
NOT FDIC INSURED
NOT BANK OR CREDIT UNION GUARANTEED
MAY LOSE VALUE

IFS-A165095 Ed. 9/2009

INDELIBLE IMAGES

Mr. Rockwell's Neighborhood

No wonder the folksy illustrator's work reflected small-town values **BY RICHARD B. WOODWARD**

IF YOU LIVED IN ARLINGTON, Vermont, in the 1940s, or in Stockbridge, Massachusetts, in the '50s, chances are you or someone you knew appeared on the cover of *The Saturday Evening Post*. Norman Rockwell's cover illustrations, which adroitly captured the nation's homiest images of itself, were based on the neighbors and surroundings the artist saw every day. He enlisted as models not only his friends and family members but also strangers he met at the bank or at a high-school basketball game.

The camera played a vital, if little-known, role in Rockwell's high fidelity, as Ron Schick's new book, *Norman Rockwell: Behind the Camera*, makes clear. Schick, who was given access to the entire archive at the Norman Rockwell Museum in Stockbridge (where a companion exhibit is on view through May 31, 2010), learned that Rockwell first made extensive use of the camera in 1935 while scouting Hannibal, Missouri, for an illustrated volume of *The Adventures of Tom Sawyer*. At first, the artist thought using a camera instead of a pencil was "cheating" and said he was "thoroughly ashamed" of tracing details from projected images. But photography, Schick writes, "transformed Rockwell's work; it instantly unlocked his aesthetic, enabling him to execute whatever he envisioned."

Rockwell would choose and decorate sets, select props, outfit and coach the actors and decide where to place the tripod, though he usually left the pressing of the shutter to an assistant. The resulting photographs, Schick says, "are like Rockwell's paintings come to life. You can explore the decisions he made. It's like watching a slow-motion film of his process." The artist himself appears in some of them, mugging and gesticulating as he acted out the roles ("He was a ham," Schick says), and he was not above banging his fist to elicit a startled expression from his subjects.

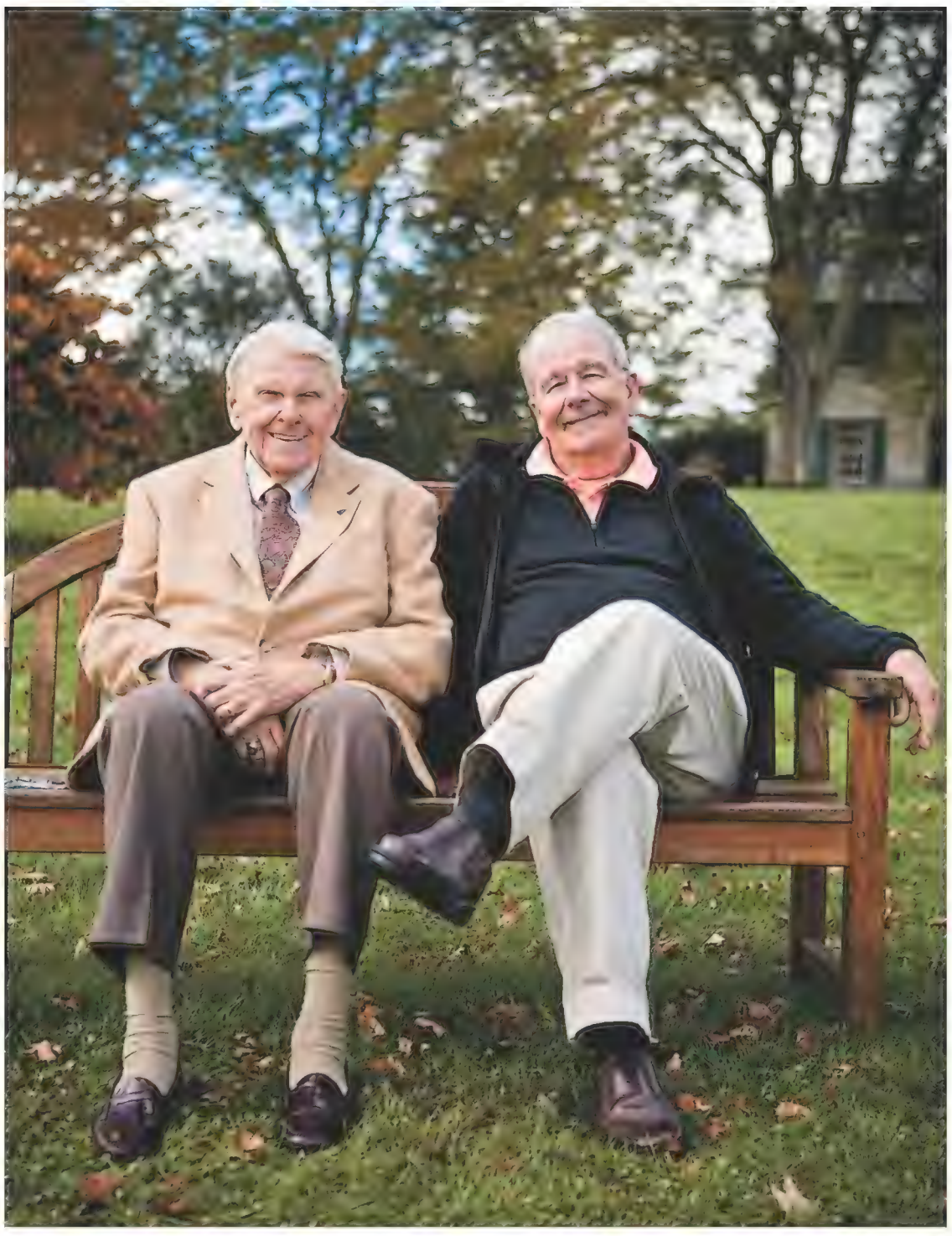
In 1958, Rockwell asked Massachusetts State Trooper Richard J. Clemens, 30, who lived a few doors from the artist in Stockbridge ("Mr. Rockwell's dog would wander into my yard"), to pose for a painting that would become a cover illustration called *The Runaway*.

"I was told to be in my uniform at the Howard Johnson's [restaurant] in Pittsfield," recalls Clemens, now 81 and retired in Clifton Park, New York. Inside, he was introduced

Left: Rockwell recruited Stockbridge neighbors, including state trooper Richard Clemens and 8-year-old Eddie Locke, to model for *The Runaway* (right).

THE NORMAN ROCKWELL FAMILY AGENCY (2)

The photographs are "like Rockwell's paintings come to life. You can explore the decisions he made."



Rockwell (above: in his studio in 1978) spent about an hour posing Clemens and Locke (left: reunited in October 2009) for the camera. "I was a little kid, but he made it easy on me," says Locke.

to 8-year-old Eddie Locke, whose father and brother Clemens already knew. Rockwell had recruited the boy from the local elementary school to play a plucky young vagabond.

To underscore the lad's meager possessions, Rockwell placed a handkerchief on a stick beneath the stool. For about an hour, Clemens and Locke sat as still as they could while the maestro adjusted their postures ("Keep one arm extended") and expressions ("Look this way and that"). "I was a little kid, but he made it easy on me," says Locke, 59, a landscaper and maintenance worker in Great Barrington, Massachusetts. Clarence Barrett, a friend of Rockwell's who worked at a local garage, manned the counter.

But when *The Runaway* appeared on the cover of the September 20, 1958, *Saturday Evening Post*, Barrett had been replaced with Rockwell's assistant Don Johnson, who had been photographed separately in the artist's Stockbridge studio. And all references to Howard Johnson's had vanished. When Clemens asked why the restaurant's celebrated 28 flavors of ice cream (listed on the mirror) had been replaced with a blackboard list of daily specials, Rockwell said he "wanted a more rural look, to suggest the kid had gotten a little further out of town. That's the kind of detail he went in for."

Clemens says his police supervisors were "very pleased a Massachusetts trooper had been chosen for a magazine cover." In fact posters of the tableau were soon hanging in law enforcement agencies throughout the country. (To show his appreciation of the force, Rockwell painted a portrait of Clemens in his winter trooper's cap and gave it to the state police, who reproduced it as a Christmas card.)

Locke also recalls posing as a boy awaiting the doctor's needle in *Before the Shot*, a Rockwell illustration that appeared on the *Post*'s cover of March 15, 1958. The assignment required that he drop his trousers just enough to expose the upper part of his buttocks. "As you might imagine, I got teased about that," Locke says. "I played baseball as a kid, and I pitched. I always claimed that I learned how to throw inside early on."

RICHARD B. WOODWARD, *a New York City-based arts critic, wrote about Ansel Adams in November's* SMITHSONIAN.

JESSICA SCRANTON; LEON KUZMANOFF / NORMAN ROCKWELL MUSEUM

SMILE! YOU ARE IN MADRID

ESPAÑA

Discover hidden corners where life carries on day... and night.

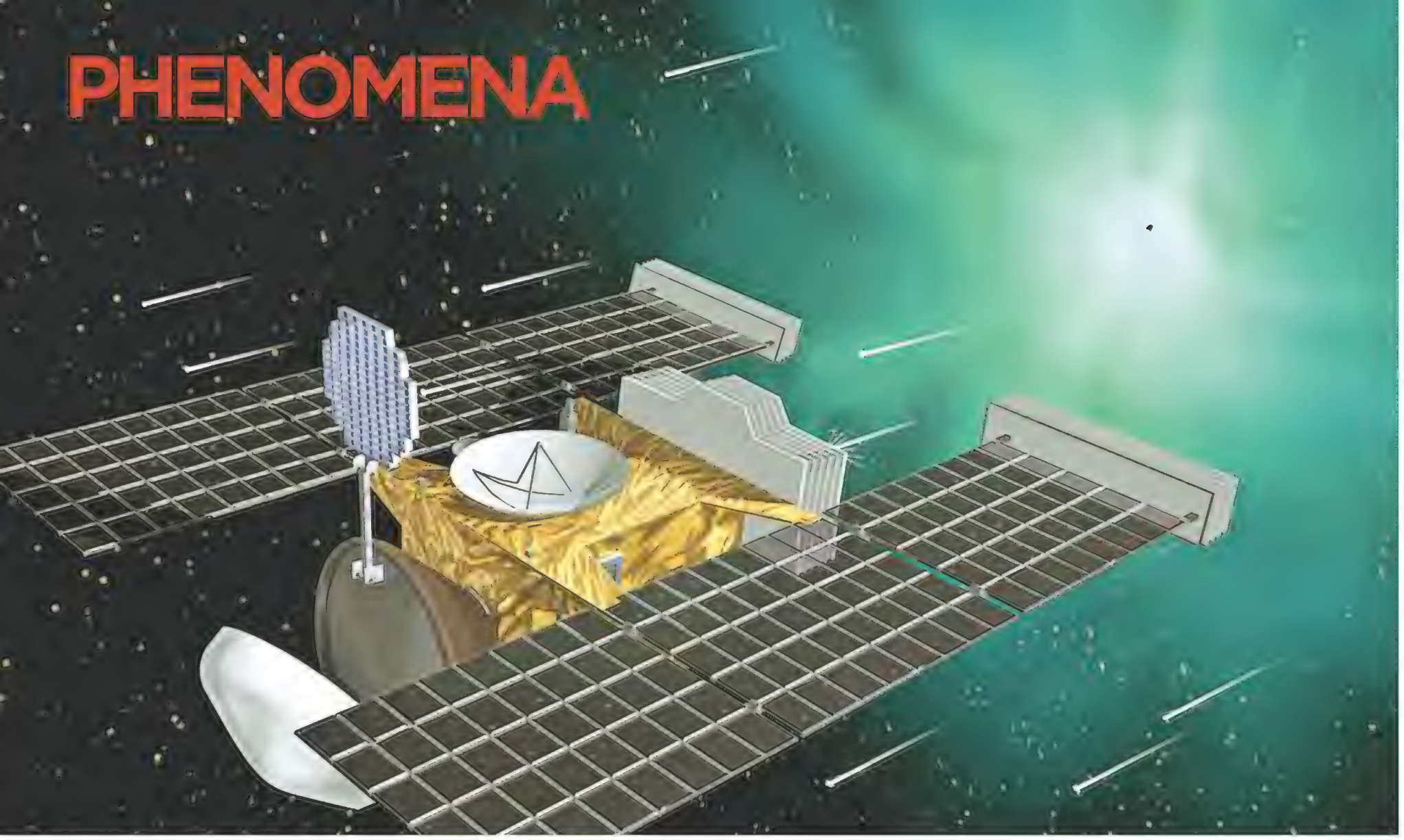
MADRID about you

¡MADRID!

www.turismomadrid.es
www.esmadrid.com
www.spain.info

TOURIST OFFICES OF SPAIN

Water Tower Place, suite 915 East 845 North Michigan Ave. Chicago, IL 60611 Tel. 1.312.642.1992 Fax: 1.312.642.9817 e-mail: chicago@tourspain.es
8383 Wilshire Blvd., Suite 960 Beverly Hills, CA 90211 Tel: 1.323.658.7188 Fax: 1.323.658.1061 e-mail: losangeles@tourspain.es
1395 Brickell Avenue, suite 1130 Miami, FL 33131 Tel: 1.305.358.1992 Fax: 1.305.358.8223 e-mail: miami@tourspain.es
666 Fifth Avenue, 35th floor New York, NY 10103 Tel: 1.212.265.8822 Fax: 1.212.265.8864 e-mail: nuevayork@tourspain.es



Cosmic Harvest

Carried back to Earth by a spacecraft, particles from a comet's tail hold clues to the origin of our solar system **BY ROBERT IRION**

AT THE THRESHOLD of a sterile lab at NASA's Johnson Space Center in Houston, I pull on a white clean-room suit, a surgical cap and mask, booties and latex gloves. My host, a mineralogist named Mike Zolensky, swabs my digital voice recorder with alcohol to remove flakes of skin and pocket lint. He doesn't want any detritus to contaminate the precious dust in the room.

Once inside, Zolensky retrieves a palm-size glass box from a cabinet. The box holds a rectangular chunk, less than two inches across, of eerily translucent material. I lean in and squint at it but can't quite focus on anything. Zolensky turns off the lights and hands me a laser pointer. The red beam reveals thin streaks in the chunk that start at its surface and penetrate fractions of an inch, like the traces of tiny bullets. "Those are the comet impacts," he says. "It's beautiful to look at."

The tracks were made during the world's first—and only—attempt to chase a comet and bring a bit of it home. The NASA mission, called Stardust, sent a spacecraft to Comet Wild 2 (pronounced "VILT-too") on a seven-year journey that ended in 2006. It brought back the only material—other than moon rocks—taken directly from an extraterrestrial body.

Scientists expect the comet dust to yield clues about how our solar system and planet were formed. Earth has been through so much in its 4.5 billion years—volcanoes have erupted, mountains have risen and fallen, heat and water have chemically transformed rocks time and again—that scientists have trouble getting their hands on the earliest possible geologic evidence in what might be called showroom condition. It has all been buried or altered. In contrast, comets, which are about the same age as Earth, are pristine relics. "There's nothing left on Earth's surface that's nearly as old as these bits of crystals and minerals," says Carlton Allen, astromaterials curator at the Johnson Space Center. A comet, he continues, harbors the "starting material for our solar system, the stuff that came together to make everything we see."

NASA

New.

Quieter than ever before.

Introducing Bose® QuietComfort® 15 Acoustic Noise Cancelling® headphones.

Our best headphones. Since we introduced the world's first noise cancelling headphones over 20 years ago, we have conducted continuous research to improve this technology. Now, we have engineered significant advances in noise reduction to make the QC®15 headphones our quietest ever. Exclusive Bose technologies electronically sense more of the sounds around you, reducing more noise across a wider range of frequencies. And we didn't stop there. We developed a new ear cushion that further reduces unwanted noise. It works in harmony with the electronics to deliver a better listening experience and a comfortable fit.

Try them for yourself risk free. When you fly, the engine roar fades even further away. When you listen to music at home or at work, fewer distractions get in the way. Less noise, along with our acclaimed lifelike sound, a fit that stays comfortable for hours and the quality you expect from Bose. It all adds up to a combination of benefits unmatched in the industry. So now you can relax and appreciate music, movies or just some serenity more than ever before. We invite you to try QC15 headphones for yourself risk free for 30 days. Shipping is free, and when you call, ask about making **12 easy payments,** with no interest charges from Bose.* We're so sure you'll be delighted, we'll even pay for return shipping if you're not.

Welcome to an even quieter world.

To order or learn more:
1-800-729-2073, ext. Q7520 or visit Bose.com/QC

BOSE®
Better sound through research®

*Bose payment plan available on orders of $299-$1500 paid by major credit card. Separate financing offers may be available for select products. See website for details. Down payment is 1/12 the product price plus applicable tax and shipping charges, charged when your order is shipped. Then, your credit card will be billed for 11 equal monthly installments beginning approximately one month from the date your order is shipped, with 0% APR and no interest charges from Bose. Credit card rules and interest may apply. U.S. residents only. Limit one active financing program per customer. ©2009 Bose Corporation. Patent rights issued and/or pending. The distinctive design of the headphone oval ring is a trademark of Bose Corporation. Financing and free shipping offers not to be combined with other offers or applied to previous purchases, and subject to change without notice. Offers are limited to purchases made from Bose and participating authorized dealers. Offer valid 8/20/09 – 12/31/09. Risk free refers to 30-day trial only and includes return shipping. Delivery is subject to product availability. C_007915

Comets originated on the outskirts of a vast cloud of gas and dust that coalesced into our solar system more than 4.5 billion years ago. Crystals of ice far from the Sun gradually combined with dust to form trillions of comets, which have orbited slowly around the Sun ever since in a deep freeze far beyond Neptune. Only when gravity from a nearby star or some cosmic disturbance nudges them do they approach the Sun; then we see streams of gas and dust as the ice vaporizes—the signature tail.

The most famous, Comet Halley, is barely ten miles across, but it produces a beautiful tail tens of millions of miles long when its looping orbit brings it between Earth and the Sun every 76 years. (Earth will see it again in 2061.) Asteroids, too, are ancient, but most orbit between Mars and Jupiter, where the Sun has baked them for billions of years. Most of them are dense and rocky, some even metallic, shedding pieces that sometimes land on Earth as meteorites.

The travel plan of NASA's Stardust sounds like a Buck Rogers adventure. Swing far past Mars to within 150 miles of Comet Wild 2, which streaks by at 13,700 miles per hour. Catch fragments without destroying them. Travel back to Earth and drop a capsule into the atmosphere for a blazing nighttime re-entry over Utah. Parachute to the ground without crashing. "We were scared up to the last second," Zolensky says. "We still can't believe it really worked."

For all the impressive rocketry, the mission's most significant technology may have been the strange substance that caught the comet dust. Called aerogel, it's the lightest

The Stardust spacecraft collected comet dust and transported it in a capsule (below: the capsule blazes to Earth near Wendover, Utah). Tests of the gel-filled collector (above: Zolensky in the Houston lab) have yielded surprising materials.

ROBERT SEALE; BRUCE FISCHER / OGDEN ASTRONOMICAL SOCIETY

The World is Our Stage

BBC EARTH

Now on DVD and Blu-ray!*

*Blue Planet available in standard DVD only.

©2009 2 entertain Video Ltd. All Rights Reserved.

Available at amazon.com

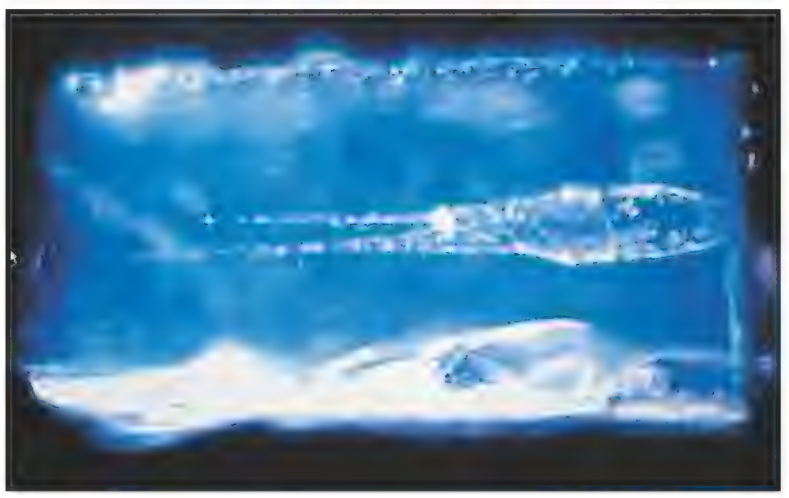
solid ever created. A slab the size of an average person would weigh less than a pound. A scientist once let me crumble some in my hand; it felt like brittle talc. Yet aerogel is tough. It's made of silica compounds arranged in an elaborate web that can snare particles plowing into it at up to six times the speed of a rifle bullet. The spacecraft carried two aluminum collecting trays shaped like oversize tennis rackets. Each tray held about 130 rectangular pockets filled with aerogel blocks smaller than ice cubes.

In the clean room, Zolensky returns the aerogel chunk to the storage cabinet and removes a bolted aluminum case. Inside lies an entire comet collection tray. It's worth about $200 million. "I'm always nervous about this part," he says. "I try not to drop it." He places the case on a stainless steel table, unbolts it and lifts the lid. "Air flows down from the ceiling, so the rule here is that we never stand over the tray," he tells me. Even with the mask on, I am acutely aware that I must not sneeze.

The aerogel cubes, tinged luminescent blue, look like puffs of breath exhaled on a winter morning and frozen solid. The laser pointer reveals scores of tracks marring the cubes' surfaces and interiors, some like sharp pinpricks, others like splaying roots.

A few dozen cubes are missing from the tray. Zolensky and his colleagues have cut out hundreds of small sections of those cubes. They remove an entire particle track by poking a pair of sharp glass fibers into the aerogel, a process that takes up to a day. The extracted piece looks like the clipped corner of a fingernail and has a particle at one end.

"We were scared up to the last second," Zolensky says. "We still can't believe it really worked."



"Aerogel" (left) is the lightest solid ever devised: a block the size of an average person would weigh less than a pound. Sent through space for three billion miles, the aerogel caught particles streaking six times faster than a bullet (right: a particle's track).

Seen through a microscope, the particle Zolensky shows me is jet black. Astronomers once pictured comets as gently disintegrating "fluffy ice balls." Then detailed photographs revealed that comets' outer rinds are blackened crusts, charred by the radiation of space. Ice and dust spew through fissures in the crust, eroding the comet's interior with each orbit. The Stardust samples—messengers from the inside of Wild 2—show that comets are dark through and through.

Under higher magnification, the dust particles look like exploded popcorn kernels. Stardust scientists were surprised to find that some of the comet's grains are made of minerals that form only at extremely high temperatures. It appears that these grains arose close to the Sun, inside the orbit of Mercury, in a blast furnace far removed from the calm, cold margins of the solar system where comets now drift.

No one had expected that the hot ingredients of the inner solar system mixed with the cold outer solar system billions of years ago. "It's a remarkable result," says planetary scientist Michael A'Hearn of the University of Maryland. "It's causing us to rethink how things got put together." It may mean that wind or radiation from the newborn Sun was stronger than expected, propelling the heat-forged grains deep into the solar system, where they merged with ices and frigid dust into comets.

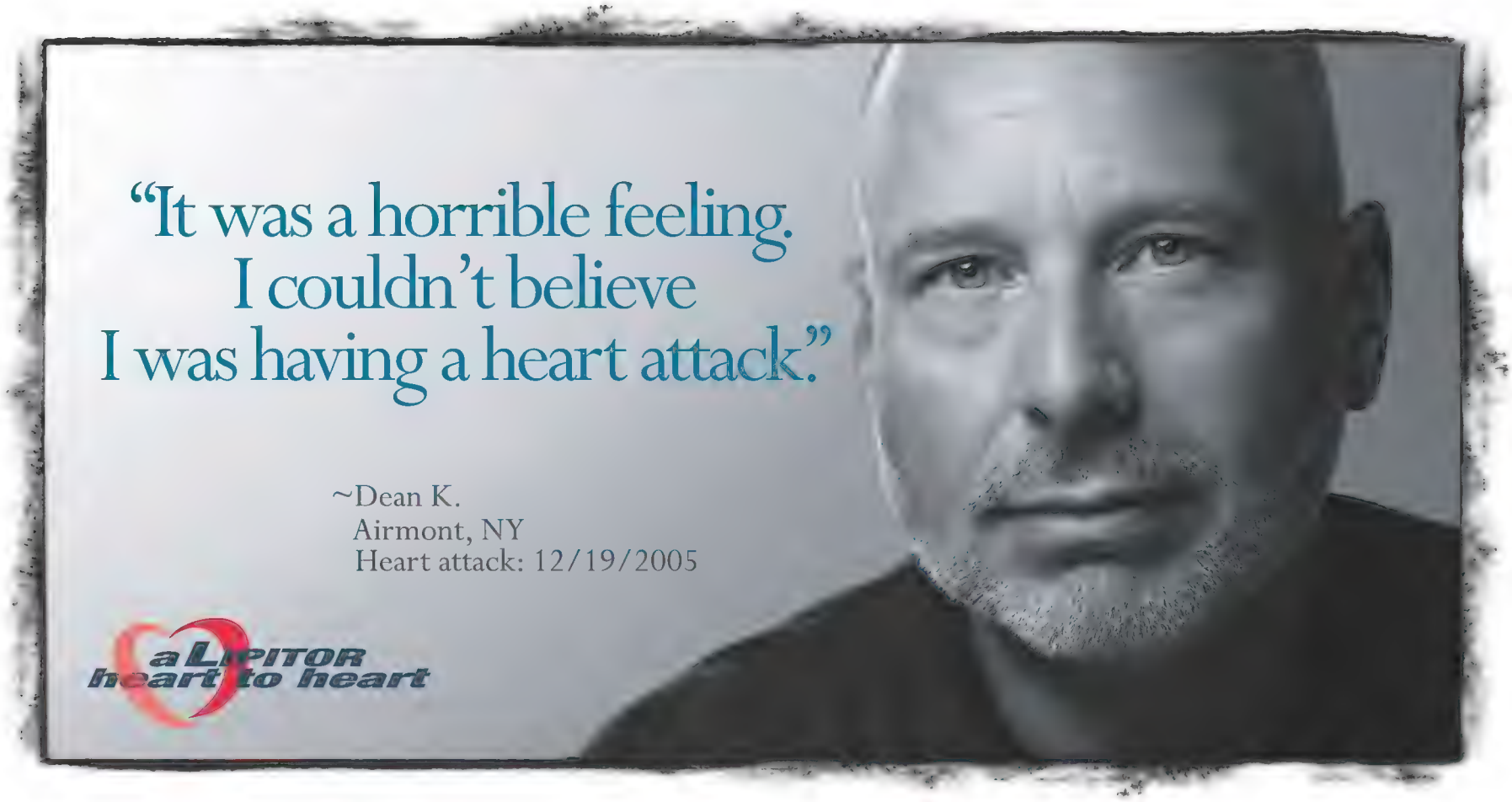
The collection tray also captured evidence suggesting that comets may have helped seed life on Earth. NASA researchers found traces of glycine—one of the amino acids that make up the proteins in all living things—on the aluminum foil lining the sides of the aerogel cubes. The discovery, confirmed this past summer, suggests that comets contain some of life's basic molecules. Comets and meteorites colliding with the young Earth would have spread such compounds, possibly providing the ingredients for the Earth's first cells.

Stardust wasn't the only comet mission. NASA's Deep Impact spacecraft slammed a probe into Comet P9/Tempel 1 in 2005 and found that the crust was rigid but the layers underneath were weak and powdery. A European mission now en route, Rosetta, will try to land on a comet in 2014, scoop up some icy dirt and analyze it on the spot.

After we strip off our clean-room suits, Zolensky takes me downstairs to see the mission's return capsule. (It is now on display at the National Air and Space Museum.) The cone-shaped shield that protected Stardust's cargo during its fiery re-entry is about a yard wide. There's some dirt on it, Utah mud from the landing. The capsule's surface, a carbon composite mixed with cork, is burned and yields slightly to the touch. The spacecraft flew three billion miles—the most distant traveler ever to find its way home.

ROBERT IRION *has written about black holes and new planets for* SMITHSONIAN.

ROBERT SEALE; PAUL CHINN / SAN FRANCISCO CHRONICLE / CORBIS



**"I should've done more to take care of myself.
Now I'm exercising, watching my diet, and I trust my heart to Lipitor."
Talk to your doctor about your risk and about Lipitor.**

- **Adding Lipitor may help, when diet and exercise are not enough. Unlike some other cholesterol-lowering medications, Lipitor is FDA-approved to reduce the risk of heart attack and stroke in patients with several common risk factors, including family history of early heart disease, high blood pressure, low good cholesterol, age and smoking.**
- **Lipitor has been extensively studied with over 17 years of research. And Lipitor is backed by 400 ongoing or completed clinical studies.**

IMPORTANT SAFETY INFORMATION:
LIPITOR is not for everyone. It is not for those with liver problems. And it is not for women who are nursing, pregnant or may become pregnant.

If you take LIPITOR, tell your doctor if you feel any new muscle pain or weakness. This could be a sign of rare but serious muscle side effects. Tell your doctor about all medications you take. This may help avoid serious drug interactions. Your doctor should do blood tests to check your liver function before and during treatment and may adjust your dose.

Common side effects are diarrhea, upset stomach, muscle and joint pain, and changes in some blood tests.

INDICATION:
LIPITOR is a prescription medicine that is used along with a low-fat diet. It lowers the LDL ("bad" cholesterol) and triglycerides in your blood. It can raise your HDL ("good" cholesterol) as well. LIPITOR can lower the risk for heart attack, stroke, certain types of heart surgery, and chest pain in patients who have heart disease or risk factors for heart disease such as age, smoking, high blood pressure, low HDL, or family history of early heart disease.

LIPITOR can lower the risk for heart attack or stroke in patients with diabetes and risk factors such as diabetic eye or kidney problems, smoking, or high blood pressure.

Please see additional important information on next page.

LIPITOR®
atorvastatin calcium
tablets

Have a heart to heart with your doctor about your risk. And about Lipitor.
Call 1-888-LIPITOR (1-888-547-4867) or visit www.lipitor.com/dean

You are encouraged to report negative side effects of prescription drugs to the FDA.
Visit www.fda.gov/medwatch or call 1-800-FDA-1088.

© 2009 Pfizer Inc. All rights reserved. LPU01267IA

IMPORTANT FACTS

LIPITOR atorvastatin calcium tablets (LIP-ih-tore)

LOWERING YOUR HIGH CHOLESTEROL

High cholesterol is more than just a number, it's a risk factor that should not be ignored. If your doctor said you have high cholesterol, you may be at an increased risk for heart attack and stroke. But the good news is, you can take steps to lower your cholesterol.

With the help of your doctor and a cholesterol-lowering medicine like LIPITOR, along with diet and exercise, you could be on your way to lowering your cholesterol.

Ready to start eating right and exercising more? Talk to your doctor and visit the American Heart Association at www.americanheart.org.

WHO IS LIPITOR FOR?

Who can take LIPITOR:

- People who cannot lower their cholesterol enough with diet and exercise
- Adults and children over 10

Who should NOT take LIPITOR:

- Women who are pregnant, may be pregnant, or may become pregnant. LIPITOR may harm your unborn baby. If you become pregnant, stop LIPITOR and call your doctor right away.
- Women who are breast-feeding. LIPITOR can pass into your breast milk and may harm your baby.
- People with liver problems
- People allergic to anything in LIPITOR

BEFORE YOU START LIPITOR

Tell your doctor:

- About all medications you take, including prescriptions, over-the-counter medications, vitamins, and herbal supplements
- If you have muscle aches or weakness
- If you drink more than 2 alcoholic drinks a day
- If you have diabetes or kidney problems
- If you have a thyroid problem

ABOUT LIPITOR

LIPITOR is a prescription medicine. Along with diet and exercise, it lowers "bad" cholesterol in your blood. It can also raise "good" cholesterol (HDL-C).

LIPITOR can lower the risk of heart attack, stroke, certain types of heart surgery, and chest pain in patients who have heart disease or risk factors for heart disease such as:

- age, smoking, high blood pressure, low HDL-C, family history of early heart disease

LIPITOR can lower the risk of heart attack or stroke in patients with diabetes and risk factors such as diabetic eye or kidney problems, smoking, or high blood pressure.

POSSIBLE SIDE EFFECTS OF LIPITOR

Serious side effects in a small number of people:

- **Muscle problems** that can lead to kidney problems, including kidney failure. Your chance for muscle problems is higher if you take certain other medicines with LIPITOR.
- **Liver problems.** Your doctor may do blood tests to check your liver before you start LIPITOR and while you are taking it.

Call your doctor right away if you have:

- Unexplained muscle weakness or pain, especially if you have a fever or feel very tired
- Allergic reactions including swelling of the face, lips, tongue, and/or throat that may cause difficulty in breathing or swallowing which may require treatment right away
- Nausea, vomiting, or stomach pain
- Brown or dark-colored urine
- Feeling more tired than usual
- Your skin and the whites of your eyes turn yellow
- Allergic skin reactions

Common side effects of LIPITOR are:

- Diarrhea
- Upset stomach
- Muscle and joint pain
- Changes in some blood tests

HOW TO TAKE LIPITOR

Do:

- Take LIPITOR as prescribed by your doctor.
- Try to eat heart-healthy foods while you take LIPITOR.
- Take LIPITOR at any time of day, with or without food.
- If you miss a dose, take it as soon as you remember. But if it has been more than 12 hours since your missed dose, wait. Take the next dose at your regular time.

Don't:

- Do not change or stop your dose before talking to your doctor.
- Do not start new medicines before talking to your doctor.
- Do not give your LIPITOR to other people. It may harm them even if your problems are the same.
- Do not break the tablet.

NEED MORE INFORMATION?

- Ask your doctor or health care provider.
- Talk to your pharmacist.
- Go to **www.lipitor.com** or call **1-888-LIPITOR**.

Uninsured? Need help paying for Pfizer medicines? Pfizer has programs that can help. Call **1-866-706-2400** or visit **www.PfizerHelpfulAnswers.com.**

Pfizer helpful answers®

Manufactured by Pfizer Ireland Pharmaceuticals, Dublin, Ireland
© 2009 Pfizer Ireland Pharmaceuticals All rights reserved.
Printed in the USA.

Distributed by Parke-Davis, Division of Pfizer Inc.
New York, NY 10017 USA
June 2009

Rx only

Around the Mall

SCENES AND SIGHTINGS FROM THE SMITHSONIAN MUSEUMS AND BEYOND

CHRISTIAN ZIEGLER

ROMANCE AT SEA

UNDERSTANDING HOW CORALS REPRODUCE IS CRITICAL TO THEIR SURVIVAL— AND SMITHSONIAN'S NANCY KNOWLTON TAKES TO THE WATER EACH YEAR TO WITNESS THE MASS SPAWNING

PAGE 22

"If we don't do something," says Knowlton, who has earned the nickname Dr. Doom, "we could lose all corals by 2050."

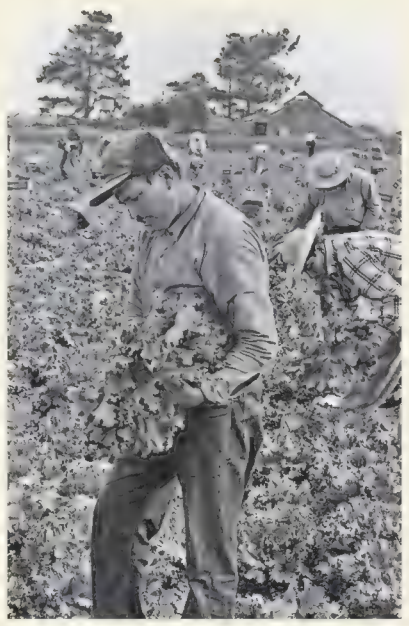
From the Castle p. 20
Object at Hand p. 24
Q&A: William T. Wiley p. 26
What's Up p. 28

FROM THE CASTLE

Our Plan

G. WAYNE CLOUGH

RESPONDING TO WORLD WAR II'S labor shortages, the federal government initiated the Bracero Program, which brought more than two million Mexican farmworkers—*braceros*—to the United States. In September, at the opening of "Bittersweet Harvest: The Bracero Program, 1942-1964," an exhibit at the National Museum of American History, Labor Secretary Hilda Solis commended the Institution for presenting the program's little-known story. It gave farmers much-needed workers, provided braceros with social and economic opportunities and increased the nation's ability to wage war. But it also brought suffering and exploitation. As Secretary Solis spoke, she looked up at Leonard Nadel's 1956 photographs documenting the workers' harsh living conditions. Her eyes welled with tears, and she said simply: "My father was a bracero." The exhibit will be on view through January 3, 2010, and then travel via the Smithsonian Institution Traveling Exhibition Service (see americanhistory.si.edu/bracero or sites.si.edu).



"Bittersweet Harvest," a Smithsonian exhibit about *braceros* (California, 1956), fits neatly into the new strategy.

"Bittersweet Harvest" fits neatly into the Smithsonian's new strategic plan: "Inspiring Generations Through Knowledge and Discovery, 2010–2015." The plan lays out four grand challenges into which we will focus resources and create new interdisciplinary centers. Two of these challenges, "Understanding the American Experience" and "Valuing World Cultures," are exemplified in "Bittersweet Harvest." Our collections of artifacts from around the country and the globe make the Smithsonian especially aware of the diversity that strengthens our own nation and of the differences between the world's many cultures. A third challenge, "Unlocking the Mysteries of the Universe," will continue our long-standing quest to understand the fundamental nature of the cosmos, using the latest technologies to explore our own solar system, meteorites, the Earth's geology and the paleontological record. The fourth challenge, "Understanding and Sustaining a Biodiverse Planet," will advance our understanding of life on Earth and respond to the growing threat of environmental change.

This fourth challenge was addressed in part from September 29 to October 1 when Smithsonian specialists—including paleontologists, art historians and environmental educators—interacted with more than 3,700 participants in 50 states and 83 countries during the Smithsonian Education Online Conference on Climate Change (smithsonianconference.org/climate/program/). The Smithsonian's mission—"the increase and diffusion of knowledge"—remains; the new strategic plan focuses that mission for the next five years. As we collaborate across disciplines, undertake both formal and informal education initiatives, embrace technology and new media, and encourage entrepreneurship and partnerships, we aim to expand the Smithsonian's worldwide services. With any luck, exponentially.

G. WAYNE CLOUGH *is Secretary of the Smithsonian Institution.*

Smithsonian Institution

SECRETARY

G. Wayne Clough

BOARD OF REGENTS

CHANCELLOR

The Chief Justice of the United States

CHAIR

Patricia Q. Stonesifer

VICE CHAIR

Alan G. Spoon

MEMBERS

Vice President of the United States, Joseph R. Biden, Jr.

Hon. Thad Cochran
Hon. Christopher J. Dodd
Hon. Patrick J. Leahy
Hon. Xavier Becerra
Hon. Sam Johnson
Hon. Doris Matsui
Dr. France Córdova
Dr. Phillip Frost
Dr. Shirley Ann Jackson
Mr. Robert P. Kogod
Mr. John W. McCarter, Jr.
Mr. David M. Rubenstein
Mr. Roger W. Sant

SMITHSONIAN NATIONAL BOARD

Mr. Paul Neely, CHAIR
Mrs. Peggy P. Burnet, VICE CHAIR
Ms. Judy S. Huret, VICE CHAIR
Mr. Gary B. Moore, VICE CHAIR

NATIONAL BOARD: Mr. Rodney C. Adkins, Mr. Gordon M. Ambach, Ms. Valerie Anders, Ms. Judy Hart Angelo, Hon. Barbara McConnell Barrett, Mr. William H. Bohnett, Mrs. Jane Lipton Cafritz, Mr. Thomas H. Castro, Mr. Wilmer S. Cody, Ms. Abby Joseph Cohen, Mr. James F. Dicke II, Mr. John G.B. Ellison, Jr., Ms. Sakurako D. Fisher, Mr. Michael R. Francis, Mr. John French III, Mrs. Shelby M. Gans, Mr. E.K. Gaylord II, Ms. Myra M. Hart, Mr. Richard W. Herbst, Mr. Robert F. Higgins, Mr. Steven G. Hoch, Ms. Anne B. Keiser,* Mr. Jonathan M. Kemper, Mrs. Betsy Lawer, Mr. Robert E. Long, Jr., Mr. Robert D. MacDonald, Mrs. Dorothy S. McAuliffe, Mr. Chris E. McNeil, Jr., Mr. Russell E. Palmer, Jr., Mr. William M. Ragland, Jr., Mrs. Kristin Richardson, Hon. Ronald A. Rosenfeld, Mrs. Theiline P. Scheumann, Mrs. Marna Schnabel, Mrs. Phyllis M. Taylor, Mr. Douglas C. Walker, Mr. Mallory Walker

HONORARY MEMBERS: Mr. Robert McC. Adams, Mr. William S. Anderson, Hon. Max N. Berry, Mr. L. Hardwick Caldwell III, Mr. Frank A. Daniels, Jr., Mr. Charles D. Dickey, Jr., Mrs. Patricia Frost, Mr. I. Michael Heyman, Mr. James M. Kemper, Jr., Mrs. Jean B. Mahoney, Justice Sandra Day O'Connor, Mr. Francis C. Rooney, Jr., Mr. Wilbur L. Ross, Jr., Mr. Lloyd G. Schermer, Hon. Frank A. Weil, Mrs. Gay F. Wray

* Ex-Officio

THE LEONARD NADEL COLLECTION / NMAH, SI

MUSIC THAT'S OFF THE CHARTS AT PRICES THAT ARE OFF THE WALL

Music downloads from eMusic: guilty pleasures, killer classics and overlooked gems at half the price of those other download stores.*

TAKE 25 TRACKS FREE, VISIT ▸ WWW.EMUSIC.COM/SMITHSONIANMAG

Get up to 25 music downloads free with a 7-day eMusic trial subscription. Offer available to first-time eMusic customers only located in the USA. Your free trial expires 7 days after registration. Certain songs will not be available during free your trial. Internet access, registration, and credit or debit card required. Limited time offer. Your subscription remains free until you exceed your free trial credits or your free trial expires. Offer and eMusic's prices are subject to change without notice and are subject to eMusic's terms of use. eMusic and the eMusic logo are either registered trademarks or trademarks of eMusic.com Inc in the USA and other countries. All Right Reserved. eMusic is not responsible for products, services, or claims made by Smithsonian.

*1/2 price claim is based on (1) eMusic's most popular Monthly Basic Plan (24 songs for $11.99) and assuming that all monthly downloads are utilized, and (2) other download stores' price of $0.99 a track.

emusic

TIMING IS EVERYTHING

CORALS SYNCHRONIZE REPRODUCTION WITH THE PRECISION OF A SYMPHONY

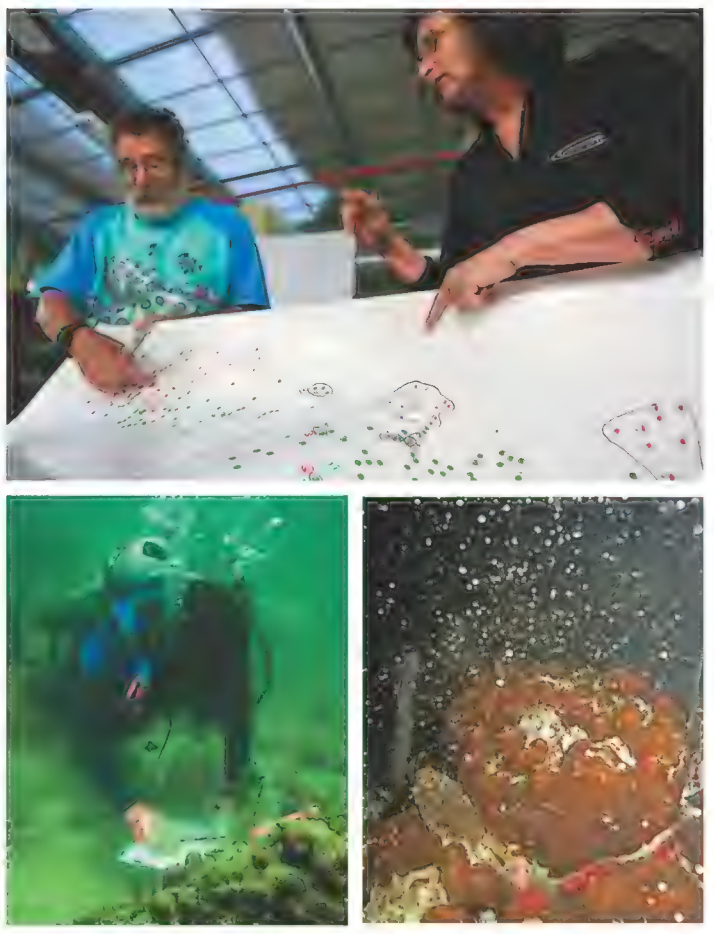
IT'S 9 P.M. AND THE CORALS ARE *STILL* NOT SPAWNING.

Nancy Knowlton and I have been underwater for an hour, diving and snorkeling about 350 feet off the coast of Solarte Island, one of 68 islands and mangrove keys on Panama's Caribbean coast.

Neon-green glow sticks hanging from underwater buoys guide our way. Occasionally, I rise to the surface and hear the thumping bass of Latin music from a coastal town. The moon is full. Surely, this is the perfect setting for a coral love fest.

But then I recall what Knowlton had said that morning, standing over a map of her study site: "The coral are fairly predictable, but they don't send us an e-mail."

Knowlton, 60, has studied coral reefs for three decades, first while monitoring the effects of Hurricane Allen, in 1980, on reefs in Jamaica; then as founding director of the Scripps Institution of Oceanography's Center for Marine Biodiversity and Conservation in San Diego; and now as the Smithsonian's Sant Chair of Marine Science at the Natural History Museum. In that time, overfishing has allowed seaweed and algae to grow unchecked, smothering coral worldwide. Poor water quality has increased coral diseases. Deforestation and the burning of fossil fuels have burdened oceans with absorbing more carbon dioxide, which increases their acidity and makes it more difficult for corals to deposit skeletons and build reefs. Currently, a third of all coral species are reportedly at risk of extinction. "If we don't do something," says Knowlton, "we could lose all corals by 2050."



Knowlton (top: with researcher Don Levitan studying a map of the reef, and above left: underwater) says coral spawning (right) is something to see "once in your life."

Such grim predictions have earned Knowlton the nickname Dr. Doom. She understands the value of coral reefs—home to one-quarter of all marine species, a source of potential biopharmaceuticals and an organic form of shoreline protection against hurricanes and tsunamis. In the Caribbean, a staggering 80 percent of corals have been destroyed in the past 30 years. Along with other marine scientists, Knowlton has been trying to help reefs survive by better understanding coral reproduction.

For decades, scientists assumed that coral colonies picked up sperm in the water and fertilized eggs internally—and some do. But in the mid-1980s, research biologists discovered that most corals are "broadcast spawners." Unable to self-fertilize, they release sacs containing both eggs and sperm, synchronizing their spawning with neighboring coral colonies. Fertilization takes place in the water. The corals appear to use three cues to begin their mass spawning: the full moon, sunset, which they sense through photoreceptors, and a chemical that allows them to "smell" each other spawning.

Since 2000, Knowlton and a team of research divers have been coming annually to Bocas del Toro, Panama. They have spotted, flagged, mapped and genetically identified more than 400 spawning coral colonies.

The next evening, with no spawning on the first night of this year's expedition, the divers pile into a boat and motor out to the site, about 20 minutes from the Smithsonian Tropical Research Institute's Bocas del Toro field station. But only a couple of young coral colonies release sacs. "Maybe they're still learning the ropes," Knowlton says.

As with most romantic encounters, timing is everything. The researchers have found that if a coral spawns just 15 minutes out of sync with its neighbors, its chance of reproductive success is greatly reduced. The looming question is, what will happen to fertilization rates as coral colonies become fewer and farther between?

By the third day, the suspense is building. "It will happen," Knowlton barks at lunch, pounding her fists on the table. As her plate rattles, a smile spreads across her face.

Sure enough, the coral colonies start spawning around 8:20 p.m. The tiny tapioca-like sacs, about two millimeters in diameter, rise in unison, slowly drifting to the surface. For the few minutes that they are suspended in the water, I feel like I'm swimming in a snow globe.

"To me, coral spawning is like a total eclipse of the sun," Knowlton says. "You should see it once in your life."

MEGAN GAMBINO

CHRISTIAN ZIEGLER (3)

See a coral colony spawn at Smithsonian.com/reefs

Our Premium Collection

Everything you need to enjoy great coffee for just $14.95—a $171 value.

One sip is all it takes to realize this is a coffee as extraordinary as the offer it comes with. Simply choose two of our delicious coffees and you'll also receive a FREE Stainless Steel 12-Cup Programmable Coffeemaker, Thermal Carafe and Travel Mug. There's no further obligation after your third additional Gevalia delivery. Order today.

Call 1•800•GEVALIA or visit GEVALIA.COM/MAG

THE GEVALIA PROMISE

Satisfaction Guaranteed. Our exclusive Stainless Steel Premium Collection is yours to keep just for trying Gevalia Kaffe for three regular deliveries. You must find Gevalia Kaffe entirely pleasing or you may cancel our service after your third delivery and keep the FREE gifts.

Reserved Deliveries. If you enjoy Gevalia, you'll automatically receive four half-pounds of the coffee(s) you select in about a month. Subsequent deliveries will arrive every six weeks. Call us at 1•800•GEVALIA to change your coffee type, delivery frequency, quantity or to cancel after your third regular delivery. Each year you'll also receive a special holiday delivery. We'll send details and seasonal pricing in advance, so you can tell us if you don't wish to receive it.

Convenient Billing. Coffees vary from $6.65 to $8.35 plus shipping and handling. Pay upon delivery. Or for added convenience, use a credit card, and subsequent deliveries will be billed to your card. Coffee prices are subject to change.

EST 853
GEVALIA®
KAFFE

You're invited to try two half-pounds of Gevalia Kaffe for only $14.95, including all delivery charges. We'll also send you a FREE Stainless Steel Programmable Coffeemaker, Thermal Carafe and Travel Mug providing you accept three additional deliveries of Gevalia. You will receive Gevalia deliveries automatically about every six weeks (or on a schedule you request), plus you may receive a special holiday delivery. You may cancel your service after your third regular delivery, and the gifts are yours to keep with no further obligation.

CODE: 123019

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____

Email _____ ☐ Please check here if you do not wish to receive special offers and news from Gevalia via email.

☐ MasterCard ☐ Visa ☐ American Express ☐ Discover

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ Card Number

☐☐☐☐ Exp. Date (MM/YY)

Signature Required _____

☐ Enclosed is my check payable to **Gevalia Kaffe** for $14.95.

Complete and mail to:
GEVALIA KAFFE, P.O. Box 6266, Dover, DE 19905-6266

Choose two coffees:

KL	☐	Signature Blend
KN	☐	Breakfast Blend
KP	☐	French Roast*
C	☐	Traditional Roast®
F	☐	Colombia
I	☐	Mocca Java
Q	☐	Hazelnut**
O	☐	French Vanilla**
L	☐	Mocha**
P	☐	Irish Creme**

☐ Regular (R)
☐ Decaf. (D)

☐ Whole Bean (1)
☐ Ground (2)

*Whole bean available in 7-oz. packages only.
**Not available in whole bean.

Choose coffeemaker color:

☐ White (WH-SF-MS) ☐ Black (BL-SF-MS)

Offer valid for new members only, limited to one per household, subject to change and expires one year from publication. Open to residents of the U.S., the U.S. Virgin Islands and Puerto Rico. We reserve the right to substitute items of equal or greater value when supplies are exceeded. Please allow one to two weeks for delivery of your shipment. Gevalia is a registered trademark. All orders are subject to approval.

THE OBJECT AT HAND | Envelope

NATIONAL POSTAL MUSEUM

SPECIAL DELIVERY

In 1934, a zeppelin bound for Brazil carried a cargo of Christmas cheer

BY OWEN EDWARDS

ON DECEMBER 8, 1934, the dirigible *Graf Zeppelin*—named for one inventor of hydrogen airships, Graf (Count) Ferdinand von Zeppelin—departed its Friedrichshafen, Germany, home base on its 418th flight, bound for Recife, Brazil. At the height of the Christmas season, the 776-foot-long dirigible carried 19 passengers, holiday mail and a load of freshly cut Christmas trees.

The cards and letters it transported bore a distinctive mark on their envelopes: a small image (known to collectors as a cachet) stamped in ink, depicting the zeppelin and a fir tree festooned with candles in Nordic fashion. One of those envelopes, now darkened with age, also bears traces of a second mark, applied during a train trip across Germany. In the 1950s, John P.V. Heinmuller, a Longines Watch Company executive and an aviation enthusiast, donated 2,000 envelopes once transported by zeppelin to the Smithsonian; today, the collection resides in the National Postal Museum (NPM).

Recipients of the *Graf Zeppelin*'s seasonal delivery would be some of South America's many German immigrants, drawn to the resource-rich continent by the promise of wealth. "There was a huge German population in South America in the '30s," says Cheryl Ganz, a curator at the NPM. "Surrounded by palm trees, they obviously had a longing for traditional fir trees. Since the *Graf Zeppelin* could make the trip nonstop in less than four days, much faster than any ship, the trees would still be fresh when they arrived." The craft landed in Recife on December 12 and went on to Rio de Janeiro, where it arrived on December 13, bringing the last of its Christmas tree shipment to holiday revelers.

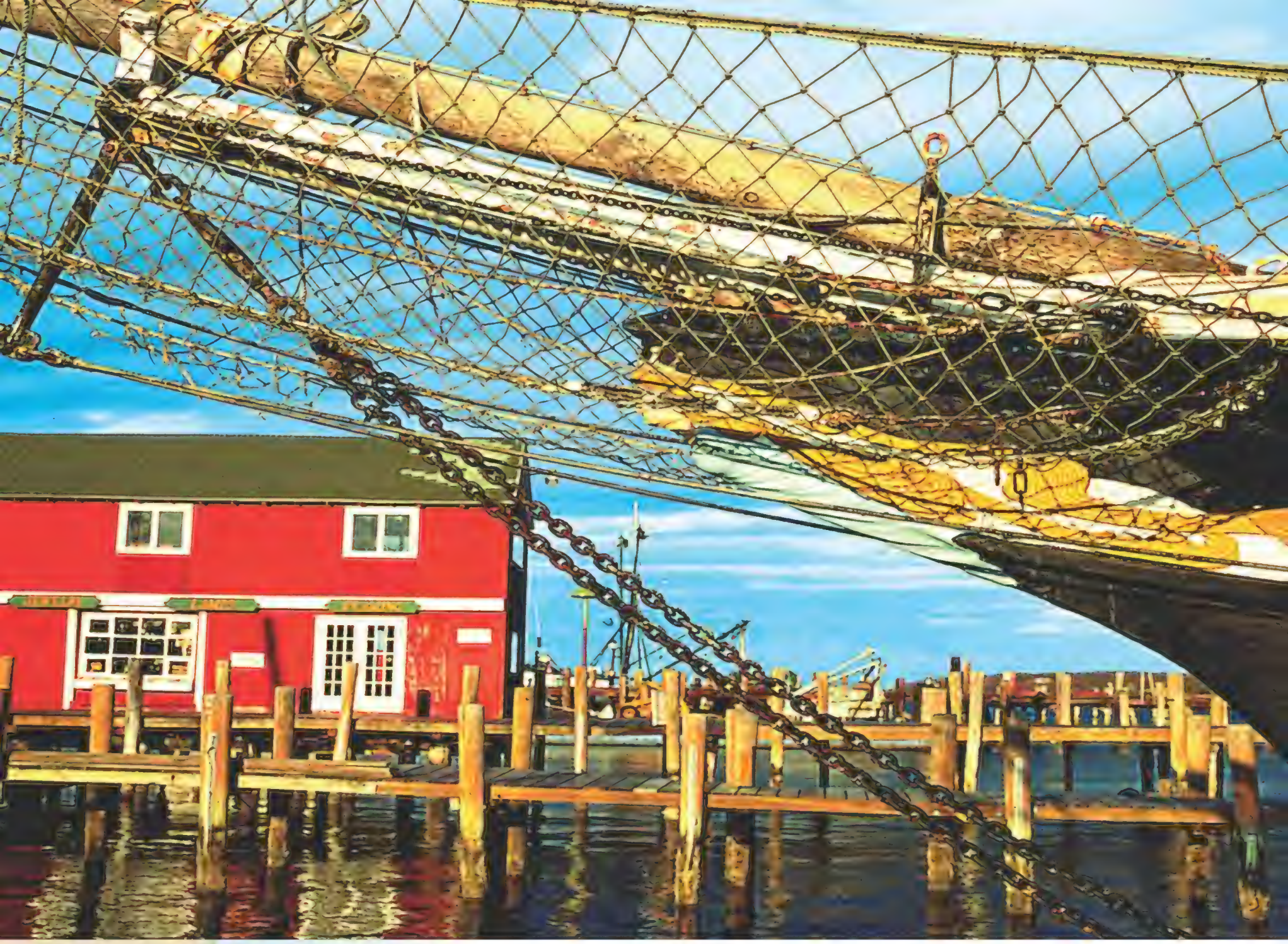
In those days, only giant airships could carry enough fuel to make nonstop trans-Atlantic flights. As early as 1921, Hugo Eckener, a former journalist who succeeded Zeppelin as head of the dirigible company, had investigated possible routes from Spain to South America by making a voyage on a cargo ship. During the crossing, Eckener observed the kinds of weather patterns and storms an airship might encounter. He calculated potential dirigible routes based on prevailing sea lanes. After the voyage, Eckener described himself as "very well satisfied" that the "area [was] suitable for flying."

The *Graf Zeppelin* made its first trans-Atlantic demonstration flight in October 1928 and was making regularly scheduled deliveries by the summer of 1934. Mail carried by zeppelin bore the distinctive cachets and postmarks. "The airships were the pathfinders for later fixed-wing flights," says Ganz. "Because the passenger and crew cabin wasn't pressurized, [dirigibles] had to fly low—low enough to see the faces of people on ships they passed over—so the crew had to figure out wind currents and weather patterns."

The age of dirigibles was relatively brief. It began in 1874, when Count von Zeppelin, a former cavalry general, began working on plans for lighter-than-air,

The dirigible *Graf Zeppelin* (above: aloft in Germany, 1933) could reach 80 miles per hour, enabling the airship, according to curator Cheryl Ganz, to cross the Atlantic Ocean nonstop in less than four days.

CORBIS; NATIONAL POSTAL MUSEUM, SI



HARBOR HOPPING

The New England Islands 8 Day/7 Night Cruise

Forged from the forces of retreating glaciers, the harbors, bays and islands of New England offer discovery and stunning beauty around every bend. Home to puritans and pirates, pilgrims and patriots, New England's history is a tapestry woven rich in significance and fascinating details.

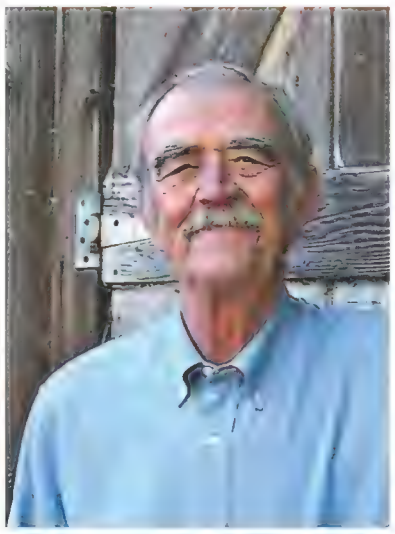
Now it's your turn to explore this cornerstone of America while cruising on the newest small cruise ship in the world. Our ships accommodate just 100 guests, a perfect way to arrive at the heart of it all.

You'll experience eight days of smooth water, beauty, culture and history, all while enjoying the camaraderie of fellow passengers and the exemplary personal attention that is the hallmark of American Cruise Lines.

1-800-460-6187
Call for your Free Brochure

AMERICAN CRUISE LINES INC
Small-Ship Cruising Done Perfectly

Martha's Vineyard • Nantucket Island • New Bedford • Block Island • Newport • Providence



Q&A

For 50 years, artist **WILLIAM T. WILEY** has approached serious topics with wit and a sense of the absurd. A retrospective of his work is on display at the Smithsonian American Art Museum. He spoke with the magazine's Abby Callard.

YOU TAUGHT ART AT THE UNIVERSITY OF CALIFORNIA AT DAVIS DURING THE 1960S. WHAT'S THE KEY DIFFERENCE BETWEEN A STUDENT AND TEACHER?
The name.

YOUR ART MAKES USE OF PLAYFUL PUNS AND RHYMES. ARE YOU HAVING FUN?
You bet. Are you?

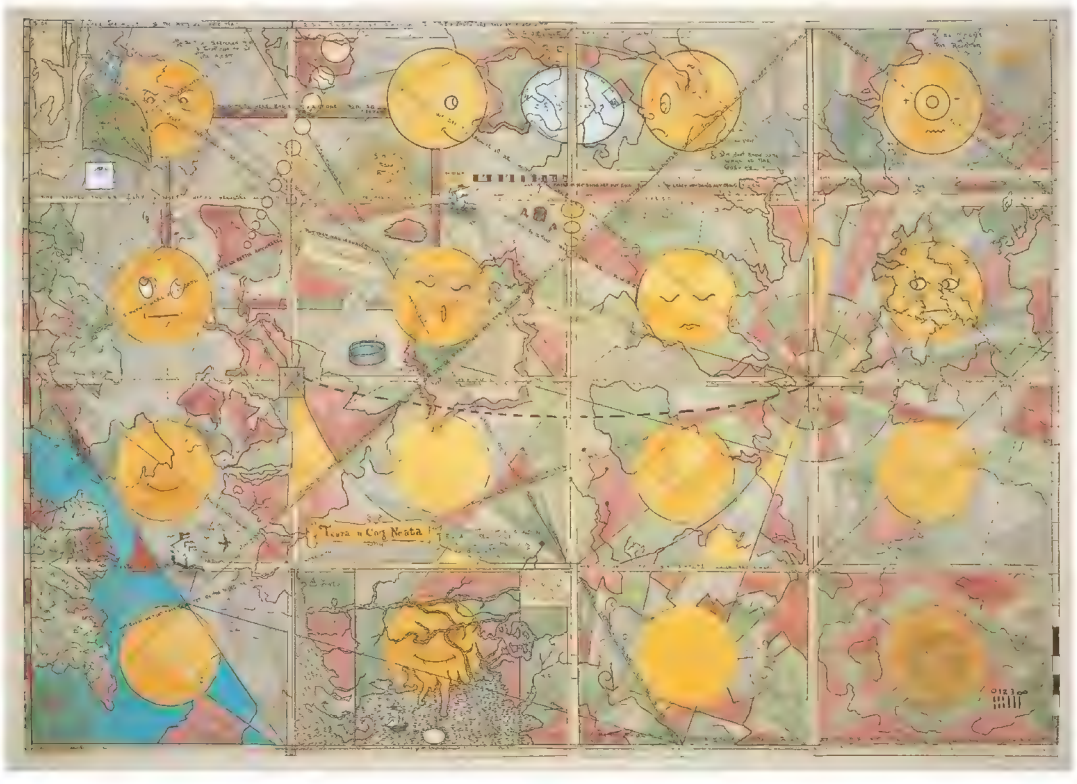
COULD YOU ELABORATE? Somebody once asked James Joyce if his puns were trivial. And he responded, "They're at least quadrivial." Puns are a way of packing more than one meaning into something—and just about everything has more than one meaning. You and I can claim to agree on what a piece of art means, but we still don't really know if we are on the same wavelength or have the same taste in our mouths.

SOME CRITICS DON'T TAKE YOUR WORK SERIOUSLY BECAUSE OF ITS PLAYFULNESS. WHAT DO YOU SAY TO THEM? They're too serious. To be stuck on this planet without humor wouldn't be much fun. Those critics should take a cue from Arthur Schopenhauer, who believed that humor is our only divine trait.

YOU'VE REFERRED TO YOUR SMITHSONIAN EXHIBIT AS AN ARCHAEOLOGICAL SITE. WHY? It's like an archaeological site because everything is not immediately obvious. There can be one bone sticking out, but you dig a little bit and discover more. I think if you give it time, my work will talk to you more—and the more you dig in, the more you might be able to uncover.

DOES YOUR ART HAVE A MIND OF ITS OWN? Perhaps. Am I doing it or is it doing me?

***Meridian Moons Overwhatarewe*, 2006.**



Read more of our interview with William T. Wiley at Smithsonian.com/wiley

propeller-driven balloons. Dirigibles began flying before World War I. During that conflict, they were used as scout aircraft and for bombing raids.

After the war, the count's company fell on hard times and was rescued by Eckener. In 1919, a British military crew made the first nonstop, trans-Atlantic flight, in a British-built dirigible, getting an eight-year jump on Charles Lindbergh and the *Spirit of St. Louis*. But the real liftoff for dirigibles came with the launch of the *Graf Zeppelin* and its larger successor, the *Hindenburg* (the length of three football fields). It is no overstatement to say that much of the world fell in love with the ponderous but stately crafts, which Eckener likened to "gleaming silver fish in an ocean of sky."

The dream machines were finally done in by a convergence of harsh realities. As Nazi repression and military ambition alarmed much of the world, Americans took note that the swastika was now painted on the tail fins of the *Graf Zeppelin* and the *Hindenburg*. Also, Hitler saw the airships—outpaced by airplanes in speed, ability to fly long distances and payload capacity—as too slow for combat and discontinued government support.

The final blow came with the Hindenburg disaster; the airship burst into flames as it landed in Lakehurst, New Jersey, on May 6, 1937; 35 of 97 passengers died. The cause of the conflagration was not difficult to remedy—a switch from flammable hydrogen to inert helium—but because zeppelins were not deemed essential to the war effort, "most of the intricate frameworks were melted down to make airplanes," Ganz says.

Today, a German firm, ZLT, has revived the zeppelin with a version that is smaller, lofted by helium and dubbed the NT (for New Technology). An American company, Airship Ventures, based in Napa, California, now flies one of the next-generation craft on sightseeing excursions.

OWEN EDWARDS *is a freelance writer and author of the book* Elegant Solutions.

SAAM; JOHN BERGGRUEN GALLERY / SAAM

Advertisement

We Apologize That It Loses 1 Second Every 20 Million Years

First Super Light Titanium Timepiece Under $200 With Precision to 1 Billionth of a Second.

The U.S. government has engineered the most ingenious, most accurate clock in the world: the F-1 U.S. Atomic Clock in Boulder, Colorado. Our extraordinary new Stauer Titanium Atomic Watch utilizes the transmissions directly from that remarkable cesium fission atomic clock to report the most precise time. This scientifically advanced timepiece will gain or lose only one second over a 20 million-year period. It is that accurate! This perfectly tuned technological invention with the super light strength of titanium is now available for UNDER $200.

Super Light Titanium has two big advantages over steel. One is corrosion resistance and the other is that titanium has the highest strength-to-weight ratio of any metal, which means that titanium is approximately 45% lighter than steel. But every other titanium watch that we can find is priced at over $400, and none of those are nearly as accurate as our atomic movement. Stauer has decided to bring these resources together in a timepiece that has the most accurate movement available today. You'll never have to set this watch. Just push one of the buttons and you are synchronized with the atomic clock in Colorado, and the hands of the watch move to the exact time position. The sleek black textured dial has luminous hands and markers plus the timepiece is water resistant to 3 ATM.

A Titanium-clad offer. This Titanium Atomic Watch exceeds the accuracy of any Swiss luxury automatic so you can be more punctual and keep most of your money in your wallet, not on your wrist. Look at your watch and we guarantee that the time is incorrect, unless you are wearing the advanced atomic technology.

The Stauer Titanium Atomic Watch is not available in stores and it comes with our 30 day money-back guarantee. If you're not completely satisfied with the accuracy, simply return the watch for the full purchase price.

Not Available in Stores

Stauer Titanium Atomic Watch ~~$195~~ now $145 +S&H

or **2 credit card payments of $72.50** +S&H

Call Toll-Free now to take advantage of this limited offer.

1-888-201-7141

Promotional Code TTA315-05
Please mention this code when you call.

To order by mail, please call for details.

Stauer
HERITAGE OF ART & SCIENCE

14101 Southcross Drive W.,
Dept. TTA315-05
Burnsville, Minnesota 55337
www.stauer.com

What's Up

SMILE FOR THE CAMERAS

The iconic Graflex Speed Graphic (below) was used by photojournalists from the 1930s to the late 1950s. American History charts the evolution of photography with an exhibit of 22 cameras, from daguerreotype to digital, until June 2010.

WIDE-OPEN SPACES

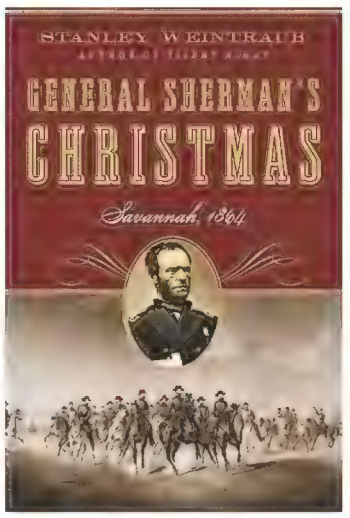
Artist John Gerrard uses customized gaming software to sculpt 3-D landscapes (left: *Grow Finish Unit*, 2008). Step into his virtual world at the Hirshhorn Museum until May 31, 2010.

AFRICAN INFLUENCE

Through July 4, 2010, a bilingual exhibit at the Anacostia Community Museum brings to light the influence of Africans on Mexican culture (right: *Portrait of a Female Soldier from Michoacán* by Agustín V. Casasola, 1910).

HOLIDAY HAVOC

In *General Sherman's Christmas* (right: Smithsonian Books, 2009), historian Stanley Weintraub chronicles the 1864 campaign to capture Savannah—the general's "Christmas Gift" to Lincoln.



MATERNAL INSTINCTS

Federico Veronesi's photograph of a cheetah licking her cub after a downpour (right) won the "animal antics" category of the *Nature's Best Photography* contest. Other winners are at Natural History through May 2, 2010.

BY ABBY CALLARD

JOHN GERRARD / HIRSHHORN MUSEUM, SI; AGUSTÍN V. CASASOLA / NATIONAL MUSEUM OF MEXICAN ART PERMANENT COLLECTION; HUGH TALMAN / NMAH, SI; SI BOOKS; FEDERICO VERONESI, NATURE'S BEST PHOTOGRAPHY WINDLAND SMITH RICE INTERNATIONAL AWARDS / NMNH, SI

VISIT THE SMITHSONIAN For a free Associates' planning packet, call 202 633-1000 or 202 357-1729 (TTY), 9 a.m. to 5 p.m. Monday through Friday and 9 a.m. to 4 p.m. Saturday. Or send an e-mail to info@si.edu. The Smithsonian Information Center in the Castle is open daily, 8:30 a.m. to 5:30 p.m. Members can visit the reception desk between 9 a.m. and 4 p.m. to register for a behind-the-scenes tour and to hear about membership benefits. Most museums are open daily, 10 a.m. to 5:30 p.m. All museums are closed December 25.

Get an insider's look at the Smithsonian at Smithsonian.com/mallblog

LUNA Y CULTURA

In Mexico City, Every Day Has a Different Night...

CIUDAD DE MÉXICO
Bésame mucho

Come and enjoy the amazing moons and culture of Mexico City.

Ciudad de México
Secretaría de Turismo

www.mexicocity.gob.mx

MÉXICO TIME TO go!

THIS MONTH IN HISTORY

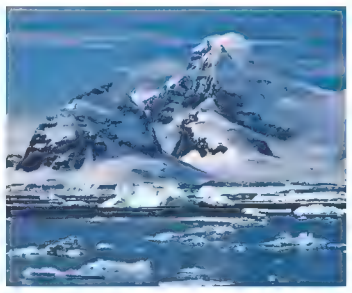
DECEMBER ANNIVERSARIES
MOMENTOUS OR MERELY MEMORABLE

BY ALISON McLEAN

70 YEARS AGO
GONE HOLLYWOOD

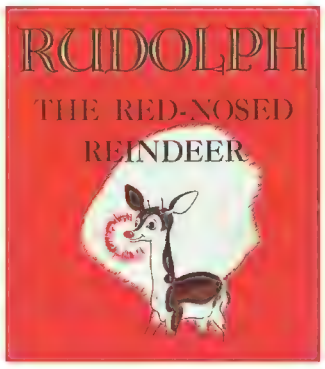
The long-awaited film version of Margaret Mitchell's Civil War saga *Gone With the Wind* (1936) premières in Atlanta December 15, 1939. Some 2,000 people, including four Confederate veterans—but not black actress Hattie McDaniel, barred for her race—enter the theater's faux plantation facade to see the four-hour epic (above: Clark Gable and Vivien Leigh), which will win eight Oscars.

50 YEARS AGO NICE ICE



The United States and 11 other nations agree, on December 1, 1959, to keep Antarctica a peaceful place of scientific research. The Antarctic Treaty, signed in Washington, D.C., bans nuclear testing and the dumping of radioactive waste, freezes territorial claims and fosters scientific cooperation. Today 47 countries have signed on, and scientists at over 100 research stations pursue subjects—in addition to the hole in the ozone layer, first reported in 1985—from the continent's biodiversity and geology to climate evolution.

70 YEARS AGO THE NOSE KNOWS



Montgomery Ward copywriter Robert L. May introduces a reindeer with an unusual talent to American children when the store hands out more than two million copies of his story verse *Rudolph the Red-Nosed Reindeer* in December 1939. Eight years later, Montgomery Ward gives May the rights to the tale of Rudolph's foggy flight; the reindeer soars to the top of the music charts in 1949 after Gene Autry records a song about him written by May's brother-in law, Johnny Marks. An animated television special, aired annually since 1964, ensures that Rudolph will "go down in his-tor-ee."

140 YEARS AGO
GO WEST, YOUNG WOMAN

The women of the recently organized Wyoming Territory are the first American females since 1807 to gain the right to vote, when Gov. John Campbell signs their enfranchisement into law December 10, 1869. Some speculate it's a ploy to attract potential wives to the state, where men outnumber women six to one, or to keep white voters in the majority. When in 1890 Wyoming applies for statehood, it successfully insists—despite Congressional pressure—that votes for women be included in its new constitution.

20 YEARS AGO SMACKDOWN

President George H.W. Bush orders U.S. troops to Panama, where military strongman Manuel Noriega, having nullified election results in order to have himself declared the country's leader, announced a state of war with the United States. Spurred by violence against three American servicemen, the invasion begins December 20, 1989; some 20,000 U.S. troops battle to secure the capital. Noriega surrenders January 3, and, convicted of drug trafficking, is sent to U.S. prison. He remains in custody in 2009, fighting extradition.

ART WOLFE / WWW.ARTWOLFE.COM; BETTMANN / CORBIS; COURTESY OF ROBERT L. MAY COMPANY, ©1939 BY ROBERT L. MAY COMPANY. USED BY PERMISSION BY THE ROBERT L. MAY COMPANY; GRANGER COLLECTION, NEW YORK; STEVE STARR / CORBIS

Visit Smithsonian.com/history for "Today in History"

"Turn it up, close your eyes and you'll think you're listening to a…sound system that costs five times more."
– Forbes FYI

"...the Wave music system will flat out seduce you."
– Rich Warren,
News-Gazette

"The sound that came out of this little thing was unbelievable... A marvel of technology."
– David Novak,
the Gadget Guy

The gift that lets them enjoy their music.

Even more.

Shown in Platinum White with optional Multi-CD Changer.

The Bose® Wave® music system and Multi-CD Changer. Give that special someone the acclaimed Wave® music system and see them smile. Give it together with the Multi-CD Changer for hours of uninterrupted music, and watch that smile grow.

Premium sound quality makes it a great gift. The Wave® music system brings new life to music. Advanced Bose technology produces what *AudioVideo International* calls "deeper bass and more accurate reproduction of the sound of musical instruments." The result is realism that more closely reproduces the magic of a live performance. And sound quality that we welcome you to compare to larger conventional systems costing much more.

The Multi-CD Changer makes it even more appreciated. Designed exclusively for the Wave® music system, the optional Multi-CD Changer allows you to enjoy convincingly accurate sound for hours on end. One CD or MP3 CD goes in the Wave® music system, and three more go in the changer. They work as one. What's more, a credit card-style remote easily operates every feature, including the FM/AM digital tuner, clock and alarm. It's all-in-one convenience from a system that provides an elegant addition to the living room, kitchen, bedroom or office.

Take advantage of our 30-day, risk-free trial. Choose your favorite color: Platinum White, Graphite Gray or Titanium Silver. And use our 30-day, risk-free trial to experience the performance in your own home.

When you call, be sure to ask about making **12 easy payments,** with no interest charges from Bose.* Order the Wave® music system today. Better yet, order it with our Multi-CD Changer by December 31, 2009, and save $100. They're the gifts that make special occasions even more special.

SAVE $100 when you order the Wave® music system with our Multi-CD Changer by December 31, 2009.

To order or learn more:

1-800-925-9738, ext. TR863

www.Bose.com/WMS

BOSE®
Better sound through research®

*Bose payment plan available on orders of $299-$1500 paid by major credit card. Separate financing offers may be available for select products. See website for details. Down payment is 1/12 the product price plus applicable tax and shipping charges, charged when your order is shipped. Then, your credit card will be billed for 11 equal monthly installments beginning approximately one month from the date your order is shipped, with 0% APR and no interest charges from Bose. Credit card rules and interest may apply. U.S. residents only. Limit one active financing program per customer. ©2009 Bose Corporation. Patent rights issued and/or pending. The Wave® music system's distinctive design is a registered trademark of Bose Corporation. Financing and reduced pricing on Multi-CD Changer package not to be combined with other offers or applied to previous purchases, and subject to change without notice. If the Wave® music system is returned, the Multi-CD Changer must be returned for a full refund. Offers are limited to purchases made from Bose and participating authorized dealers. Offer valid 11/1/09-12/31/09. Risk free refers to 30-day trial only and does not include return shipping. Quotes reprinted with permission: Thomas Jackson, *Forbes FYI*, Winter/04.

YOUR SMITHSONIAN.COM

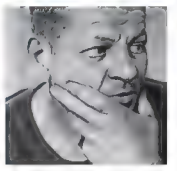
READER CONTRIBUTIONS TO OUR WEB SITE

YOUR KIND OF TOWN

BY JIM BANISTER
ROCK PORT, MO

ROCK PORT SITS IN THE northwest corner of the state, just five miles east of Nebraska and ten miles south of Iowa. It is a farming community. You will see a lot of John Deere hats, work boots, bearded faces and weather-toughened hands. The town recently put up four wind turbines to provide electricity and bills itself as "the first city in America to be 100 percent wind powered." Rock Port has struggled in this era of corporate farms. Population has decreased. Main Street, which used to be where much of the county came to shop for clothing, furniture, automobiles, groceries and a host of other goods, and where farm kids went to the movies on Saturday night, is pretty much a ghost town after 6. "A Proud Past and a Bold Future," says the sign at the city limit. This friendly, deserving small town needs a bold future. If it comes, it will be because of wind power and biofuels.

Submit a **Your Kind of Town** story or photograph and find others at Smithsonian.com/yourkindoftown



WHAT'S IN A NAME Within days of posting "Decoding Jackson Pollock" on Smithsonian.com, 1.2 million people viewed the article—and more than 600 commented on author Henry Adams' theory that Pollock (inset) hid a huge version of his name within his 1943 painting *Mural* (above).

Sorry, but I don't buy it. Looks to me like another example of seeing what you want to see, like the "face" on Mars. —**Steve Isaacson**, Seattle

Using letters or words to activate a blank canvas is not an unusual device; it gives the painter something to respond to, especially if the artist's intention is to avoid representation. This brilliant discovery reminds us of the rewards of sustained looking at paintings. —**Stephanie Peek,** San Francisco

I found my name. Did Pollock hide that too?
—**Jason Wagner,** Coram, New York

Pollock's work is signature enough—he wouldn't need to do this to ensure he's remembered.
—**Francis Schwitzgebel-Torres,** Betanzos, Bolivia

I think Henry Adams' discovery is intriguing. If it makes you take a little more time to closely examine one of the greatest painters of the 20th century, this is a fabulous outcome.
—**Thomas Ball,** Cleveland

Nobody saw the name until now? Seriously? That's the part I find hard to believe. — **Rebecca Haney,** Dallas

Join the debate at Smithsonian.com/pollock

PHOTO CONTEST
EDITORS' PICK

"I saw the frog walking across a dining room window at my parents' house. I ran to get my camera and managed to get this shot before I startled him. There was backlighting from the sun, and thanks to my parents, the glass was very clean."

—**Jose Mediavilla**, of Deltona, Florida, on his 2009 photograph of a tree frog

VISIT OUR WEB SITE TO SUBMIT A PHOTO TO OUR 7TH ANNUAL CONTEST

UNIVERSITY OF IOWA MUSEUM OF ART, GIFT OF PEGGY GUGGENHEIM (1959.6) / ©2009 POLLOCK-KRASNER FOUNDATION / ARS, NY; TONY VACCARO / AKG-IMAGES; CHARLIE RIEDEL / AP IMAGES; JOSE MEDIAVILLA

Chest congested?

© RBI 2009 1200 080409

For long lasting relief, evict mucus.

Only Mucinex® gets rid of mucus for 12 hours. Mucinex is specially made to break up mucus that causes chest congestion. And thanks to a unique dual-release formula, only Mucinex gives you 12 hours of long-lasting relief.*

Mucinex®
Mucinex in. Mucus out.®

www.mucinex.com

*per dose

Use as directed.

Smithsonian
DECEMBER 2009 · VOLUME 40, NUMBER 9

In the Ecuador wilderness (guides Nelson, at the helm, and Paa), the author sought the roots of the illegal animal trade (a blue-headed parrot chick).

Stolen animals are a $10 billion business worldwide. A journey into the Amazon Basin traces the illicit origins of

Wildlife Trafficking

TEXT AND PHOTOGRAPHS BY CHARLES BERGMAN

Two fire-red birds swooped screeching through the forest, flared their yellow and blue wings and alighted on the upright trunk of a dead palm tree. In the green shadows, the scarlet macaws were dazzling; they might as well have been shot from flamethrowers. One slipped into a hole in the tree, then popped its head out and touched beaks with its mate, whose long red tail pressed against the trunk. The birds eyed us suspiciously.

As well they should have.

I was with hunters who wanted the macaws' chicks. We were in the Amazon Basin of northern Ecuador, where I had gone to learn more about wildlife trafficking in Latin America. I wanted to get to the source of the problem. I wanted to learn what its consequences were—for people and wildlife. These two macaws would serve as my lens.

Wildlife trafficking is thought to be the third most valuable illicit commerce in the world, after drugs and weapons, worth an estimated $10 billion a year, according to the U.S. State Department. Birds are the most common contraband; the State Department estimates that two million to five million wild birds, from hummingbirds to parrots to harpy eagles, are traded illegally worldwide every year. Millions of turtles, crocodiles, snakes and other reptiles are also trafficked, as well as mammals and insects.

Since 1973, the buying and selling of wildlife across borders has been regulated by the Convention on International Trade in Endangered Species (CITES), whose purpose is to prevent such trade from threatening the survival of 5,000 animal and 28,000 plant species. CITES enforcement falls largely to individual countries, many of which impose additional regulations on wildlife trade. In the United States, the Wild Bird Conservation Act of 1992 outlawed the importation of most wild-caught birds. (Unless you're at a flea market on the southern border, any parrot you see for sale in the United States was almost certainly bred in captivity.) In 2007, the European Union banned the importation of all wild birds; Ecuador and all but a few other South American countries ban the commercial harvesting and export of wild-caught parrots.

"We do not lack laws against the trade," María Fernanda Espinosa, director of the International Union for Conservation of Nature in South America, said in her office in Quito, Ecuador's capital city. (She has since been named Ecuador's minister of culture and natural heritage.) "But there is a lack of resources, and that means it is not a conservation priority." In all of Ecuador, as few as nine police officers have been assigned to illegal trafficking.

Latin America is vulnerable to wildlife trafficking because of its extraordinary biodiversity. Ecuador—about the size of Colorado—has about 1,600 species of birds; the entire continental United States has about 900. Accurate data about the illegal trade in animals and plants are hard to come by. Brazil is the Latin American nation with the most comprehensive information; its Institute of Environment and Natural Resources cites estimates that at least 12 million wild animals are poached there each year.

Animals ripped from their habitat suffer, of course. They are smuggled in thermoses and nylon stockings, stuffed into toilet paper tubes, hair curlers and hubcaps. At one market in Ecuador, I was offered a parakeet. I asked the seller how I would get it on an airplane. "Give it vodka and put it in your pocket," he said. "It will be quiet." Conservationists say most captured wild animals die before reaching a buyer. In northwest Guyana, I saw 25 blue-and-yellow macaws—almost certainly smuggled from Venezuela—being carried from jungle to city in small, crowded cages. When I observed a police bust at a market in Belém, Brazil, one of the 38 birds confiscated was a barn owl crammed in a cardboard box hidden under furniture

The scarlet macaw (opposite: at its nest in a palm tree in an Ecuador forest) is prized by smugglers. Indigenous people are entitled to keep wild animals as pets (below left: Paa and a blue-headed parrot; right: boy with saddle-backed tamarins).

MAP: GUILBERT GATES

at the back of a market stall. At one rescue center outside Quito, I saw a turtle with two bullet holes in its carapace. Its owners had used it for target practice.

Animals stolen in Latin America often end up in the United States, Europe or Japan. But many never leave their native countries, being installed in hotels and restaurants or becoming household pets. In Latin America, keeping local animals—parrots, monkeys and turtles—is an old tradition. In parts of Brazil, tamed wild animals are called *xerimbabos*, which means "something beloved." In recent surveys, 30 percent of Brazilians and 25 percent of Costa Ricans said they had kept wild animals as pets.

Habitat loss is probably the main threat to New World tropical animals, says Carlos Drews, a biologist for the World Wildlife Fund in Costa Rica. "Wildlife trafficking and overexploitation are probably second." As one zoo director in Brazil told me, "There are no limits. You can buy whatever you want. Every species is for sale."

MY GUIDES AND I HAD BEEN TRAVELING by canoe down a small river in the Napo region of Ecuador when we found the scarlet macaws. We scrambled from the canoe and hustled through thick mud toward the tree, sinking at times to our knees. On a small rise, we quickly built a leafy blind out of tree branches. The macaws had left as we entered the jungle, and we waited behind the blind for them to return. We wanted to watch their comings and goings to see if they had chicks. The macaws returned to the nest right away. One announced itself with raucous "rraa-aar" screeches, then landed on the trunk, clinging sideways while it looked at the blind.

Like many parrot species, scarlet macaws (*Ara macao*) pair up in long-term relationships. They can live for decades. The birds eat fruit and nuts, nest high in trees, and raise one or two chicks at a time. Their range extends from Mexico to Peru, Bolivia and Brazil. We were lucky to find a pair nesting low enough to be easily visible.

Scarlet macaws are a study in primary colors—fiery red, cadmium yellow and dark blue. Yet each has distinctive markings. The red on the macaw at the nest shaded in places to flame orange, with blue tips to the yellow feathers on its wings. Small red feathers dotted its pale-skinned face, like freckles on a redhead. Apparently satisfied that there was no danger, the

In a raid at one market, environmental police in Belém, Brazil (below: an officer with a parrot), confiscated 38 birds (above: a barn owl) being sold illegally and arrested traffickers. "This is my only money," one of them said. "Yes, I'll sell again."

CHARLES BERGMAN *has written about jaguars and monkeys for* SMITHSONIAN *and is writing a book about the wild animal trade.*

mate flew into the nest hole. The first bird left the tree, and the macaw in the hole peeked out at us.

"How much could this bird sell for?" I asked.

"Maybe $150 around here," said Fausto, the canoe driver. (I use my guides' first names to preserve their anonymity.)

I was surprised. I'd been offered many animals in my research on the wildlife trade, and $150 was about what I would have expected in Quito. It was more than what most people on this river make in a year.

At one market in Ecuador, I was offered a parakeet. I asked the seller how I would get it on an airplane. "Give it vodka and put it in your pocket."

Fausto, who came from another part of the country but had picked up the local language, made his living hauling cargo on rivers and hunting animals for meat. He had introduced me to Paa, a hunter from the Huaorani people, who had invited us to join him as he tried to catch a macaw. The Huaorani had fiercely maintained their independence through centuries of colonization; only when oil exploration reached this part of the Amazon in the 1960s and '70s did their culture begin to change. Many Huaorani still maintain traditional ways. They and other local indigenous people sometimes eat macaws.

Animals are central to the Huaorani, and almost as many pets as people live in Paa's community, from monkeys and macaws to turtles and tapirs. It is legal for the Huaorani and other indigenous peoples of Ecuador to capture animals from the jungle. The Huaorani domesticate the animals, or semi-domesticate them. What is illegal is to sell them. Paa said he wanted to catch the macaw chicks to make them pets.

"Are you going to cut this tree down?" I asked Fausto.

"It depends if there are babies or just eggs," he said.

Though the techniques for catching animals are as varied as human ingenuity, hunters often fell trees to capture chicks, which can be tamed to live with people. (Eggs are unlikely to yield chicks that live, and adults are too wild to domesticate.)

The macaw inside the nest eyed us for a time and then dropped out of sight into the cavity. The other macaw retreated to a roost above us in a tree, occasionally croaking to its mate.

Paa and Fausto spoke in Huaorani. Fausto translated: "There are no babies," he said. "They have eggs. We have to wait until the babies are bigger."

We agreed to return in several weeks, when the chicks would be near fledging.

"But don't count on the nest still being here," Fausto said. "Someone else will take these birds. I know what happens on the river."

PSITTACINES—THE PARROT FAMILY, which includes parrots, parakeets and macaws—are among the most popular animals in the pet trade, legal and illegal. And no wonder. "What more could you ask for in a pet?" said Jamie Gilardi, director of the World Parrot Trust. Parrots are some of the most spectacular creatures in the world. "They seem as smart as a human companion and are incredibly engaging and endlessly fascinating," Gilardi said. "Humans find them fun to be around, and have done so for millennia." (At the same time, he cautions that parrots are also demanding pets that live for decades.) Indeed, archaeological studies have uncovered scarlet macaw feathers and bones dating from 1,000 years ago in Native American sites in New Mexico; the birds had been transported at least 700 miles.

International laws may be helping to reduce some parrot smuggling. The estimated number of parrots taken illegally from Mexico to the United States declined from 150,000 a year in the late 1980s to perhaps 9,400 now. But the toll on parrots of all kinds remains huge. In an analysis of studies done in 14 Latin American nations, biologists found that 30 percent of parrot nests had been poached; perhaps 400,000 to 800,000 parrot chicks were taken from nests every year.

Many experts say wild parrots can no longer sustain such losses. Of the 145 parrot species in the Americas, 46 are at

While the author was boating near the Napo River, a passerby (below) tried to sell him an armadillo. At a riverside bazaar, he found an abundance of illicit goods, including turtle eggs (right) and meat from 22 different species.

risk of extinction. And the rarer the species, the more valuable it is to poachers—which only puts more pressure on the few remaining specimens. A single Lear's macaw, one of the coveted "blue macaws" from Brazil, can ultimately sell for $10,000 or more. The trade can send even apparently healthy species over the edge. Charles Munn, a parrot researcher at Tropical Nature, a Philadelphia-based conservation group that advocates ecotourism, told me, "If you shoot macaws for meat or feathers, or if you take the babies from the nest, you can wipe them out quickly. Poaching can get out of control quickly."

Even after the nest had been robbed, the parent macaws had stayed by the downed tree, the image of fidelity and loss.

SEVERAL WEEKS AFTER our first visit, we headed back to the scarlet macaw nest in a large canoe powered by a 25-horsepower motor. I had been thinking a lot about the macaws, wondering if I could persuade Paa not to cut down the tree.

It was just a couple of days before a *feria*, or market day, at a small town upstream from the nest. Canoes loaded with people and merchandise passed us; the passengers had been traveling for days, camping on sandbars. After reaching a dirt road built by the oil companies, they would hitchhike or walk another 15 miles to the village. Many canoes held animals. We stopped to visit with one boatload of 14 people, from elders to small babies. The driver offered to sell me an armadillo. It could be a pet or a meal, he said. He pulled a struggling baby armadillo, still pink, from a bag. He would let me have it for $20.

In the middle of the canoe were boxes of smoked meat. The charred hand of a monkey stuck out of one, fingers clenched. Indigenous people may legally hunt for subsistence purposes, but *carne del monte*, or wild meat, is illegal to sell without approval from the Ministry of Environment. Still, the meat is popular. At a market in the Ecuadoran Amazon Basin I saw for sale the meat of turtles, agoutis (a large rodent), armadillos and monkeys—all illegal. Other people on their way upriver to the feria carried peccaries (related to pigs), blue-headed parrots and parakeets. Selling them is just about the only way they had of making a few dollars.

The canoes carrying meat and animals for sale increased my worries about the scarlet macaws. Still, I had reason to hope the nest was intact. Paa said he had not heard anything about them. And two weeks earlier, I had heard through friends that Fausto had seen the birds at the nest on one of his trips downriver. Fausto was not with us this time. This canoe belonged to two young Huaorani brothers with English names, Nelson and Joel.

When we rounded the bend near the nest, the two macaws were sitting together on a branch. Their backs to us, they gleamed red in the morning sun. Their long tails waved and shimmered in the soft breeze. When they saw us, the birds screamed, lifted from their branch and disappeared into the dark forest. I was relieved to see them.

Then we saw the fresh footprints on the shore. We raced to the nest. The tree lay on the ground, smashed and wet. There were no chicks. All that remained were a few wet and mangled feathers near the nest hole.

We stood around the tree, speechless, as if by a coffin. Paa said he had not taken the chicks—someone else had. He shrugged. I was coming to realize, regardless of the laws in big cities, that capturing animals in the jungle is common. It's not the shadowy activity people might think; it's more like an open secret. The downed tree, to me, represented all the waste and destruction of this illicit trade, which destroys not only wild parrots but also the trees that serve as nest sites year after year. Thus trafficking harms future generations, too.

We did not know whether the babies survived the crash of the tree onto the ground. (A recent study in Peru found that 48 percent of all blue-and-yellow macaws die when their trees are felled.) Even after the nest had been robbed, the parent macaws had stayed by the downed tree, the image of fidelity and loss.

"Who do you think did this?" I asked no one in particular.

Poachers hack down trees to get at nesting chicks (below left: the ravaged home of the scarlet macaw shown on p. 36). The wanton practice kills animals (below right: a dead baby macaw found near another felled tree) and destroys prime habitats.

View more photos along the smugglers' trade routes at Smithsonian.com/trafficking

Nelson said: "Three or four days ago, Fausto was seen coming up the river. He had three scarlet macaw chicks in his canoe."

Could it have been Fausto, who warned me that he did not think this nest would survive? It had not occurred to me that he would poach these macaws, and it felt like a betrayal. The next day, on the river, we would ask him ourselves.

WE WERE HAVING LUNCH on a sandbar when we heard another canoe motoring upriver—Fausto, returning home. He had been hunting. His canoe held two live turtles and a dead guan, a turkey-like bird.

We asked him if he had taken the macaw chicks. He denied it.

"But I know who did it," he said. "They told me there were only eggs still in the nest. No chicks."

We asked him about the three scarlet macaw babies he had in his canoe just a few days earlier.

"Those were from another nest farther downriver," he said. He said he had cut down another tree with crimson-fronted macaws, near his house, but the babies were already fledged and flew out of the nest hole as the tree crashed to the ground.

His story seemed garbled and doubtful. In any event, it was clear that he was poaching animals. I had traveled with a trafficker for more than a week without realizing it.

As we rode back up the river, I asked the Huaorani men if they worried that overhunting would mean their wildlife would disappear. "We have to put the brakes on," Nelson said, adding that they had to travel farther and farther just to find animals. "We see the animals disappearing. We have to raise consciousness. We want to be the protectors of wildlife."

In his early 20s, Nelson may speak for a new generation in the Amazon Basin of Ecuador. A few others I spoke with shared his view. Some are hoping to turn to tourism as an alternative to poaching. The Napo Wildlife Center in Ecuador, for instance, employs Quichua people as expert guides for tourists. Anti-poaching initiatives are trying to raise awareness about wildlife and provide incentives to protect it.

Still, people are poor, and they continue to see wildlife as a resource to earn money. During one nesting season, we had identified five active nests of macaws and parrots, including the scarlet macaws, two pairs of chestnut-fronted macaws, one pair of blue-headed parrots and one pair of black-headed parrots. As we journeyed up and down the river, we watched for the nest trees. Every one of them had been cut down. The parents had vanished. Here and in many places, trafficking is creating a strange world, a forest without its creatures—a naked forest.

Animals rescued from the wildlife trade are often sent to rehabilitation centers (above: a baby sloth is cared for in Belém; below: workers at the Amazoonico facility near Tena, Ecuador, release a capuchin monkey into the wild).

HALLELUJAH

Tired of financial headaches and temperamental divas, Handel turned from opera to choral music. The result was *Messiah*, more popular than ever 250 years after the composer's death

BY JONATHAN KANDELL

George Frideric Handel's *Messiah* was originally an Easter offering. It burst onto the stage of Musick Hall in Dublin on April 13, 1742. The audience swelled to a record 700, as ladies had heeded pleas by management to wear dresses "without Hoops" in order to make "Room for more company." Handel's superstar status was not the only draw; many also came to glimpse the contralto, Susannah Cibber, then embroiled in a scandalous divorce.

The men and women in attendance sat mesmerized from the moment the tenor followed the mournful string overture with his piercing opening line: "Comfort ye, comfort ye my people, saith your God." Soloists alternated with wave upon wave of chorus, until, near the midway point, Cibber intoned: "He was despised and rejected of men, a man of sorrows and acquainted with grief." So moved was the Rev. Patrick Delany that he leapt to his feet and cried out: "Woman, for this be all thy sins forgiven thee!"

Now, of course, *Messiah* is a fixture of the Christmas season. Woe to the concert hall in the United States or Britain that fails to schedule the piece around the holiday, when, as well, CD sales and Web downloads of the oratorio soar. For many amateur choirs, the work is the heart of their repertoire and the high point of the year. In most of Handel's oratorios, the soloists dominate and the choir sings only brief choruses. But in *Messiah*, says Laurence Cummings, director of the London Handel Orchestra, "the chorus propels the work forward with great emotional impact and uplifting messages."

This year, the 250th anniversary of Handel's death, has been a boon to the Baroque composer and his best-known work. The commemoration has centered in London, where

PP. 42-43 AGE FOTOSTOCK

George Frideric Handel (left: at age 64 in 1749) produced works, including *Messiah* (above: a 1742 printing; below: a bound copy of the score) that dazzled even the musical titans who would succeed him. In 1823, Beethoven proclaimed Handel to be the "greatest composer that ever lived."

Handel lived for 49 years, until his death in 1759 at age 74. The BBC has broadcast all of his operas, more than 40 in total, and every one of the composer's keyboard suites and cantatas was performed during the annual London Handel Festival, which included concerts at St. George's Hanover Square church, where Handel worshiped, and at the Handel House Museum ("See Handel Slept Here," p.45), longtime residence of the man that Ludwig van Beethoven himself, citing *Messiah*, said was the "greatest composer that ever lived."

HE WAS BORN IN HALLE, GERMANY, into a religious, affluent household. His father, Georg Händel, a celebrated surgeon in northern Germany, wanted his son to study the law. But an acquaintance, the Duke of Weissenfels, heard the prodigy, then barely 11, playing the organ. The nobleman's recognition of the boy's genius likely influenced the doctor's decision to allow his son to become a musician. By 18, Handel had composed his first opera, *Almira*, initially performed in Hamburg in 1705. During the next five years, he was employed as a musician, composer and conductor at courts and churches in Rome, Florence, Naples and Venice, as well as in Germany, where the Elector of Hanover, the future King George I of England, was briefly his patron.

Handel's restless independence contrasted him with the other great composer of the age, Johann Sebastian Bach (1685-1750), whom he did not meet. "Bach never moved out

BRIDGEMAN ART LIBRARY INTERNATIONAL; BRITISH LIBRARY / BRIDGEMAN ART LIBRARY INTERNATIONAL

Oratorios required neither elaborate scenery nor foreign stars. "Handel could be more his own master."

of the cocoon of court patronage or church employment," says Harry Bicket, a conductor, harpsichordist and London-based director of The English Concert chamber orchestra. Handel, on the other hand, rarely attached himself to any benefactor for long, although he would compose court music when asked. He wrote *The Water Music* (1717), one of the few of his pieces other than *Messiah* recognizable to the average concertgoer, for George I, to be performed for the monarch as His Majesty's barge navigated through a London canal on a summer evening. "But [Handel] didn't hang around palace antechambers waiting for his lordship or royal highness," says Jonathan Keates, author of *Handel: The Man and his Music*.

Such free-spirited musical entrepreneurship was more than possible in London, to which Handel moved permanently in 1710. A commercial boom underpinned by overseas trade had created a thriving new merchant and professional class that broke the monopoly on cultural patronage by the nobility. Adding zest to the London music scene were rivalries that split the audience into two broad musical camps. On one side were defenders of the more conventional Italian opera style, who idolized the composer Giovanni Bononcini (1670-1747) and brought him to London. Enthusiasts of Handel's new Italian operas cast their lot with the German-born composer. The partisanship was captured in a 1725 verse by poet John Byrom:

Some say compared to Bononcini,
That Mynheer Handel's but a Ninny;
Others aver, that he to Handel
Is scarcely fit to hold a Candle

Increasingly elaborate opera productions led to rising costs due, in part, to hiring musicians and singers from Italy. "It was generally agreed Italian singers were better trained and more talented than local products," notes Christopher Hogwood, a Handel biographer and founder of the Academy of Ancient Music, the London period-instrument orchestra he directs. But beautiful voices were often accompanied by mercurial temperaments. At a 1727 opera performance, Handel's leading sopranos, Francesca Cuzzoni and Faustina Bordoni, actually came to blows onstage, with their partisans cheering them on. "Shame that two such well-bred ladies should call [each other] Bitch and Whore, should scold and fight," John Arbuthnot (1667-1735), the mathematician and satirist, wrote in a pamphlet describing the increasing hysteria of London's opera world.

A child prodigy (above left: young Handel in an 1893 painting), the composer later created new Italian operas, challenging rival Giovanni Bononcini (above right), who wrote traditional Italian operas. Fiercely independent, Handel did not court patrons: "He didn't hang around palace antechambers waiting for his lordship or royal highness," says biographer Jonathan Keates.

In the 1730s, the emotional and financial toll of producing operas, as well as changing audience tastes, contributed to Handel's growing interest in sacred oratorios—which required neither elaborate scenery nor foreign stars—including, eventually, *Messiah*. "With oratorios, Handel could be more his own master," says Keates.

Despite his fame, Handel's inner life remains enigmatic. "We know far more about the environment in which he lived

MARGARET ISABEL DICKSEE / ROYAL PAVILION, LIBRARIES & MUSEUMS, BRIGHTON & HOVE / BRIDGEMAN ART LIBRARY INTERNATIONAL; AKG-IMAGES

HANDEL SLEPT HERE

The composer's early-Georgian town house reflects his life and times

THE HOUSE IN WHICH GEORGE FRIDERIC HANDEL LIVED and worked for nearly 36 years, beginning in 1723, lies in the heart of London's bustling Mayfair district, bounded by Grosvenor Square to its west and Hanover Square to its east, a neighborhood now favored by foreign embassies and boutiques. But back in the 1700s, these were the city's rural western outskirts. Cows were still driven up and down Park Lane, today an elegant avenue. Sheep grazed in Hyde Park. And Kensington, today a fashionable residential area, was still a village, where coaches on the way to London often got mired in mud.

Since opening as a museum in 2001, Handel House has been restored in the style of the composer's time. The interior is largely repainted its original gray. The composer's bedroom is draped in crimson, including a bed that seems far too short for such a large man. "People back then were encouraged to sleep sitting up to aid their digestion—and of course, that may well have been the case with Handel," says Sarah Bardwell,

Handel House was reopened in 2001 (from left: a spinet from the 1740s; performers practicing on period instruments). "Knowing that Handel rehearsed in this same room is quite amazing," says soprano Emily Atkinson.

director of the Handel House Museum. Among the 18th-century paintings on display are portraits of Handel patrons and friends, such as King George I, the poet Alexander Pope and the playwright-composer John Gay, best known for *The Beggar's Opera* (1728).

On a warm May night, I went to Handel House to attend a program of short pieces by Handel and several of his Baroque-era contemporaries, performed by a soprano and a trio of musicians playing period instruments—an oboe, cello and harpsichord. The instruments were restored 18th-century devices or replicas meant to convey a sound close to what Handel had in mind. The concert took place in the same second-floor rehearsal room where the composer's close friends and patrons gathered to listen to his works. There were 28 ticket holders in a cramped space no larger than a typical suburban living room.

For me, the high point was an aria—"Endless Pleasure, Endless Love," from Handel's 1744 opera, *Semele*—sung by Emily Atkinson, a 27-year-old Colorado-born soprano who came to London five years ago to study Baroque singing. "Knowing that Handel rehearsed in this same room is quite amazing," Atkinson said. She did not shift her feet during the recital—perhaps because the old wooden floor planks could creak loudly.

She had sung Handel music on many occasions, some of them during this anniversary year. But Atkinson could barely contain her enthusiasm at the prospect of performing, in the chorus, the most familiar piece of all. "I am about to sing *Messiah* for the first time," she said, beaming. **J.K.**

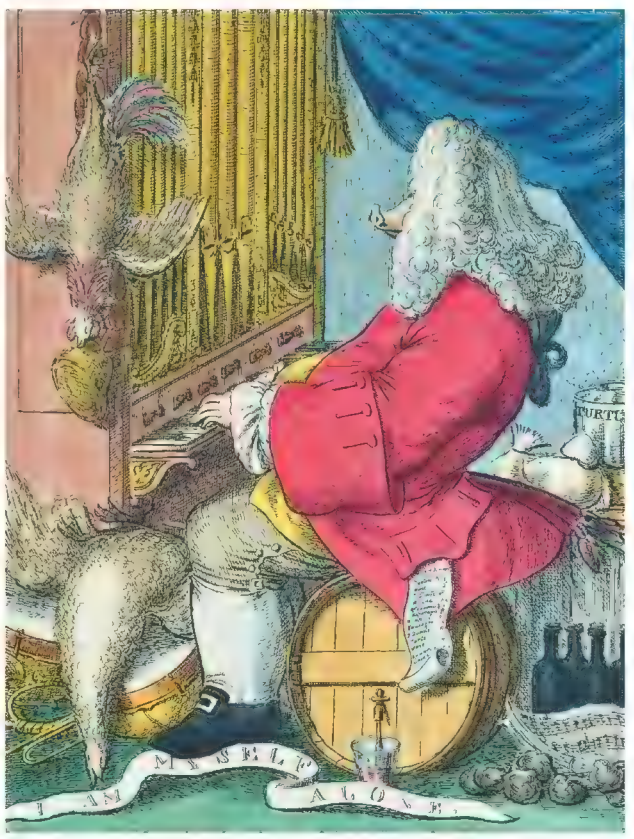
LEON NEAL / AFP / GETTY IMAGES; BEN FISHER / HANDEL HOUSE TRUST LTD. (2)

"Even when the subject of his work is religious, Handel is writing about the human response to the divine."

and the sort of people he knew than about his private life," Keates adds. Part of the explanation lies in the dearth of personal letters. We must rely on contradictory descriptions of Handel by admirers and detractors, whose opinions were colored by the musical rivalries of 1700s London.

Although he neither married nor was known to have had a long-lasting romantic relationship, Handel was pursued by various young women and a leading Italian soprano, Vittoria Tarquini, according to accounts by his contemporaries.

tion to [food] than is becoming to any man," wrote Handel's earliest biographer, John Mainwaring, in 1760. Artist Joseph Goupy, who designed scenery for Handel operas, complained that he was served a meager dinner at the composer's home in 1745; only afterward did he discover his host in the next room, secretly gorging on "claret and French dishes." The irate Goupy produced a caricature of Handel at an organ keyboard, his face contorted into a pig snout, surrounded by fowl, wine bottles and oysters strewn at his feet.



Handel—volatile and fond of French cuisine—loomed large on the London scene (from left: in 1704, dueling with a musician; caricatured as a pig-snouted glutton who denied a guest food; St. George's Hanover Square church, where he worshiped). Yet Handel also was famously generous: "He may have been mean with food, but not with money," says biographer Keates.

Intensely loyal to friends and colleagues, he was capable of appalling temper outbursts. Because of a dispute over seating in an orchestra pit, he fought a near-fatal duel with a fellow composer and musician, Johann Mattheson, whose sword thrust was blunted by a metal button on Handel's coat. Yet the two remained close friends for years afterward. During rehearsals at a London opera house with Francesca Cuzzoni, Handel grew so infuriated by her refusal to follow his every instruction that he grabbed her by the waist and threatened to hurl her out an open window. "I know well that you are a real she-devil, but I will have you know that I am Beelzebub!" he screamed at the terrified soprano.

Handel, who grew increasingly obese over the years, certainly had an intimidating physique. "He paid more atten-

"He may have been mean with food, but not with money," says Keates. Amassing a fortune through his music and shrewd investments in London's burgeoning stock market, Handel donated munificently to orphans, retired musicians and the ill. (He gave his portion of his *Messiah* debut proceeds to a debtors' prison and hospital in Dublin.) A sense of humanity imbues his music as well—a point often made by conductors who compare Handel with Bach. But where Bach's oratorios exalted God, Handel was more concerned with the feelings of mortals. "Even when the subject of his work is religious, Handel is writing about the human response to the divine," says conductor Bicket. Nowhere is this more apparent than in *Messiah*. "The feelings of joy you get from the Hallelujah choruses are second to none," says conductor Cummings. "And how can anybody resist the Amen chorus at the end? It will always lift your spirits if you are feeling down."

Classical music aficionado **JONATHAN KANDELL** *is based in New York City.*

ARTHUR A. DIXON / STAPLETON COLLECTION / BRIDGEMAN ART LIBRARY INTERNATIONAL; BRIDGEMAN ART LIBRARY INTERNATIONAL; ALAMY

He was a hardworking farm boy.

She was an Italian supermodel.

He knew he would have just one chance to impress her.

The fastest and easiest way to learn ITALIAN.

Arabic • Chinese (Mandarin) **• Danish • Dutch • English** (American) **• English** (British) **• Filipino** (Tagalog) **• French • German Greek • Hebrew • Hindi • Indonesian • Irish • Italian • Japanese • Korean • Latin • Pashto • Persian** (Farsi) **• Polish Portuguese** (Brazil) **• Russian • Spanish** (Latin America) **• Spanish** (Spain) **• Swahili • Swedish • Thai • Turkish • Vietnamese • Welsh**

Rosetta Stone® brings you a complete language-learning solution, wherever you are: at home, in-the-car or on-the-go. You'll learn quickly and effectively, without translation or memorization. You'll discover our method, which keeps you excited to learn more and more.

- You'll experience **Dynamic Immersion**® as you match real-world images to words spoken by native speakers so you'll find yourself engaged and learn your second language like you learned your first.
- Our proprietary **Speech Recognition Technology** evaluates your speech and coaches you on more accurate pronunciation. You'll speak naturally.
- Only Rosetta Stone has **Adaptive Recall,**® that brings back material to help you where you need it most, for more effective progress.
- And Rosetta Stone includes **Audio Companion**® so that you can take the Rosetta Stone experience anywhere you use a CD or MP3 player.

Innovative software. Immersive method. Complete mobility. It's the total solution. Get Rosetta Stone—**The Fastest Way to Learn a Language. Guaranteed.**®

SAVE 10%!

SIX-MONTH, NO-RISK MONEY-BACK GUARANTEE.*

Level 1	Reg. ~~$229~~	NOW $206
Level 1&2	Reg. ~~$409~~	NOW $368
Level 1,2&3	Reg. ~~$539~~	NOW $485

FREE SHIPPING

©2008 Rosetta Stone Ltd. All rights reserved. Offer applies to Personal Edition only. Patent rights pending. Offer cannot be combined with any other offer. Prices subject to change without notice. *Six-Month Money-Back Guarantee is limited to product purchases made directly from Rosetta Stone and does not include return shipping. Guarantee does not apply to an online subscription or to Audio Companion purchased separately from the CD-ROM product. All materials included with the product at the time of purchase must be returned together and undamaged to be eligible for any exchange or refund.

Call
(866) 677-5893

Online
RosettaStone.com/sss129

Use promotional code sss129 when ordering.
Offer expires January 10, 2010.

RosettaStone®

HANDEL COMPOSED *Messiah* in an astounding interlude, somewhere between three and four weeks in August and September 1741. "He would literally write from morning to night," says Sarah Bardwell of the Handel House Museum in London. The text was prepared in July by the prominent librettist, Charles Jennens, and was intended for an Easter performance the following year. "I hope [Handel] will lay out his whole Genius & Skill upon it, that the Composition may excel all his former Compositions, as the Subject excels every other Subject," Jennens wrote to a friend.

There were several reasons for the choice of Dublin for *Messiah*'s debut. Handel had been downcast by the apathetic reception that London audiences had given his works the previous season. He did not want to risk another critical failure, especially with such an unorthodox

Handel chose Musick Hall in Dublin as the venue for the triumphant première of *Messiah* on April 13, 1742 (left: the Hall's entrance arch, all that remains). The work met with immediate acclaim (right: an 1865 performance in London's Crystal Palace). To this day, insists conductor Laurence Cummings, "the feelings of joy you get from the Hallelujah choruses are second to none."

piece. Other Handel oratorios had strong plots anchored by dramatic confrontations between leading characters. But *Messiah* offered the loosest of narratives: the first part prophesied the birth of Jesus Christ; the second exalted his sacrifice for humankind; and the final section heralded his Resurrection.

Dublin was one of the fastest-growing, most prosperous cities in Europe, with a wealthy elite eager to display its sophistication and the economic clout to stage a major cultural event. "So it was a great advantage for Handel to make the voyage to Dublin to try out his new work, and then bring it back to London," says Keates, comparing the composer to Broadway producers who tried out plays in New Haven before staging them in New York City.

Messiah's success in Dublin was in fact quickly repeated in London. It took time for *Messiah* to find its niche as a Christmas favorite. "There is so much fine Easter music—Bach's *St. Matthew Passion*, most especially—and so little great sacral music written for Christmas," says Cummings. "But the whole first part of *Messiah* is about the birth of Christ." By the early 19th century, performances of *Messiah* had become an even stronger Yuletide tradition in the United States than in Britain.

There is little doubt about Handel's own fondness for the work. His annual benefit concerts for his favorite charity—London's Foundling Hospital, a home for abandoned and orphaned children—always included *Messiah*. And, in 1759, when he was blind and in failing health, he insisted on attending an April 6 performance of *Messiah* at the Theatre Royal in Covent Garden. Eight days later, Handel died at home.

His total estate was assessed at 20,000 pounds, which made him a millionaire by modern standards. He left the bulk of his fortune to charities and much of the remainder to friends, servants and his family in Germany. His one posthumous present to himself was £600 for his own monument at Westminster Abbey, final resting place for British monarchs and their most accomplished subjects. Three years after Handel's death, the monument by French sculptor Louis François Roubillac, was installed.

Abroad, Handel's reputation—and that of his best-known composition—only continued to grow. Mozart paid Handel the supreme compliment of reorchestrating *Messiah* in 1789. Even Mozart, however, confessed himself to be humble in the face of Handel's genius. He insisted that any alterations to Handel's score should not be interpreted as an effort to improve the music. "Handel knows better than any of us what will make an effect," Mozart said. "When he chooses, he strikes like a thunderbolt."

Learn more about the enduring appeal of Handel's oratorio at Smithsonian.com/messiah

MARK FURNESS / MARY EVANS PICTURE LIBRARY; GRANGER COLLECTION, NEW YORK

Paul Fredrick

YOUR FIT. YOUR STYLE.®

Crisp, comfortable white 100% cotton pinpoint oxford dress shirts in **Regular, Big & Tall or Trim Fit** at a

SPECIAL INTRODUCTORY PRICE...

$19.95

Reg. $39.50-$49.50

Plus, FREE monogramming!
(an $8.50 value)

Add this Multi Color Basketweave Necktie for only $19.95!

Item #THD1560
(Regularly $49.50)

More options than you'll find anywhere else!

Your Collar Style: Six Collar Choices.
Your Cuff: Button or French Cuff.
Your Fit: Regular, Big & Tall or Trim.
Your Size: 14½" x 32" to 20" x 37".

Specify promotional code **T9HSSS**.

New customer offer. Limit four shirts per customer. Shipping charges extra. Cannot be combined with other offers. Expires 1/31/10.

Order Today! Call **1-800-247-1417** or visit **PaulFredrick.com/special**

THE PYRAMID MAN

An amateur archaeologist says he's discovered the world's oldest pyramids—in Bosnia. But many experts remain dubious

BY COLIN WOODARD

SAM OSMANAGICH KNEELS DOWN next to a low wall, part of a 6-by-10-foot rectangle of fieldstone with an earthen floor. If I'd come upon it in a farmer's backyard here on the edge of Visoko—in Bosnia and Herzegovina, 15 miles northwest of Sarajevo—I would have assumed it to be the foundation of a shed or cottage abandoned by some 19th-century peasant.

Osmanagich, a blond, 49-year-old Bosnian who has lived for 16 years in Houston, Texas, has a more colorful explanation. "Maybe it's a burial site, and maybe it's an entrance, but I think it's some type of ornament, because this is where the western and northern sides meet," he says, gesturing toward the summit of Pljesevica Hill, 350 feet above us. "You find evidence of the stone structure everywhere. Consequently, you can conclude that the whole thing is a pyramid."

Not just any pyramid, but what Osmanagich calls the Pyramid of the Moon, the world's largest—and oldest—step pyramid. Looming above the opposite side of town is the so-called Pyramid of the Sun—also known as Visocica Hill—which, at 720 feet, also dwarfs the Great Pyramids of Egypt. A third pyramid, he says, is in the nearby hills. All of them, he says, are some 12,000 years old. During that time much of Europe was under a mile-thick sheet of ice and most of hu-

Osmanagich claims that 12,000 years ago—when most of humanity had yet to invent agriculture—early Europeans built "the greatest pyramidal complex" on earth, in Bosnia.

"When I first read about the pyramids I thought it was a very funny joke," says museum curator Amar Karapus.

manity had yet to invent agriculture. As a group, Osmanagich says, these structures are part of "the greatest pyramidal complex ever built on the face of the earth."

In a country still recovering from the 1992-95 genocidal war, in which some 100,000 people were killed and 2.2 million were driven from their homes (the majority of them Bosnian Muslims), Osmanagich's claims have found a surprisingly receptive audience. Even Bosnian officials—including a prime minister and two presidents—have embraced them, along with the Sarajevo-based news media and hundreds of thousands of ordinary Bosnians, drawn to the promise of a glorious past and a more prosperous future for their battered country. Skeptics, who say the pyramid claims are examples of pseudo-archaeology pressed into the service of nationalism, have been shouted down and called anti-Bosnian.

Pyramid mania has descended upon Bosnia. Over 400,000 people have visited the sites since October 2005, when Osmanagich announced his discovery. Souvenir stands peddle pyramid-themed T-shirts, wood carvings, piggy banks, clocks and flip-flops. Nearby eateries serve meals on pyramid-shaped plates and coffee comes with pyramid-emblazoned sugar packets. Foreigners by the thousands have come to see what all the fuss is about, drawn by reports by the BBC, Associated Press, Agence France-Presse and ABC's *Nightline* (which

PP. 52-53 BOSNIANPYRAMID.COM; PP 50-51 MORTEN HVAAL

Visocica Hill (opposite), a.k.a. the "Pyramid of the Sun," overlooks Visoko, a bastion of support for Bosnian Muslim nationalists. The town was shelled during the civil war (bottom) and is also the site of the ruins of a medieval fortress (above: a reconstruction).

BOSNIA AND HERZEGOVINA COMMISSION OF NATIONAL MONUMENTS; MAP: GUILBERT GATES; AFP / GETTY IMAGES

reported that thermal imaging had "apparently" revealed the presence of man-made, concrete blocks beneath the valley).

Osmanagich has also received official backing. His Pyramid of the Sun Foundation in Sarajevo has garnered hundreds of thousands of dollars in public donations and thousands more from state-owned companies. After Malaysia's former prime minister, Mahathir Mohamad, toured Visoko in July 2006, more contributions poured in. Christian Schwarz-Schilling, the former high representative for the international community in Bosnia and Herzegovina, visited the site in July 2007, then declared that "I was surprised with what I saw before my eyes, and the fact that such structures exist in Bosnia and Herzegovina."

Osmanagich's many appearances on television have made him a national celebrity. In Sarajevo, people gape at him on the streets and seek his autograph in cafés. When I was with him one day at the entrance to city hall, guards jumped out of their booths to embrace him.

Five years ago, almost no one had ever heard of him. Born in Zenica, about 20 miles north of Visoko, he earned a master's degree in international economics and politics at the University of Sarajevo. (Years later, he obtained a doctorate in the sociology of history.) He left Bosnia before its civil war, emigrating to Houston in 1993 (because, in part, of its warm climate), where he started a successful metalworking business that he still owns today. While in Texas he got interested in the Aztec, Incan and Maya civilizations and made frequent trips to visit pyramid sites in Central and South America. He says that he's visited hundreds of pyramids worldwide.

His views of world history—described in his books published in Bosnia—are unconventional. In *The World of the Maya*, which was reprinted in English in the United

States, he writes that "Mayan hieroglyphics tell us that their ancestors came from the Pleiades. . . . first arriving at Atlantis where they created an advanced civilization." He speculates that when a 26,000-year cycle of the Maya calendar is completed in 2012, humankind might be raised to a higher level by vibrations that will "overcome the age of darkness which has been oppressing us." In another work, *Alternative History*, he argues that Adolf Hitler and other Nazi leaders escaped to a secret underground base in Antarctica from which they did battle with Adm. Richard Byrd's 1946 Antarctic expedition.

"His books are filled with these kinds of stories," says journalist Vuk Bacanovic, one of Osmanagich's few identifiable critics in the Sarajevo press corps. "It's like a religion based on corrupted New Age ideology."

IN APRIL 2005, while in Bosnia to promote his books, Osmanagich accepted an invitation to visit a local museum and the summit of Visocica, which is topped by the ruins of Visoki, a seat of Bosnia's medieval kings. "What really caught my eye was that the hill had the shape of a pyramid," he recalls. "Then I looked across the valley and I saw what we today call the Bosnian Pyramid of the Moon, with three triangular sides and a flat top." Upon consulting a compass, he concluded the sides of the pyramid were perfectly oriented toward the cardinal points (north, south, east and west). He was convinced this was not "the work of Mother Nature."

After his mountaintop epiphany, Osmanagich secured digging permits from the appropriate authorities, drilled some core samples and wrote a new book, *The Bosnian Pyramid of the Sun,* which announced "to the world that in the heart of Bosnia" is a hidden "stepped pyramid whose creators were ancient Europeans." He then set up a nonprofit foundation called the Archaeological Park: Bosnian Pyramid of the Sun Foundation, which allowed him to seek funding for his planned excavation and preservation work.

"What he's found isn't even unusual or spectacular," says Boston University geologist Robert Schoch.

"When I first read about the pyramids I thought it was a very funny joke," says Amar Karapus, a curator at the National Museum of Bosnia and Herzegovina in Sarajevo. "I just couldn't believe that anyone in the world could believe this."

VISOKO LIES NEAR the southern end of a valley that runs from Sarajevo to Zenica. The valley has been quarried for centuries and its geological history is well understood. It was formed some ten million years ago as the mountains of Central Bosnia were pushing skyward and was soon flooded, forming a lake 40 miles long. As the mountains continued to rise over the next few million years, sediments washed into the lake and settled on the bottom in layers. If you dig in the valley today, you can expect to find alternating layers of various thickness, from gossamer-thin clay sediments (deposited in quiet times) to plates of sandstones or thick layers of conglomerates (sedimentary rocks deposited when raging rivers dumped heavy debris into the lake). Subsequent tectonic activity buckled sections of lakebed, creating angular hills, and shattered rock layers, leaving fractured plates of sandstone and chunky blocks of conglomerate.

In early 2006 Osmanagich asked a team of geologists from the nearby University of Tuzla to analyze core samples at Visocica. They found that his pyramid was composed of the same matter as other mountains in the area: alternating layers of conglomerate, clay and sandstone.

Nonetheless, Osmanagich put scores of laborers to work digging on the hills. It was just as the geologists had predicted: the excavations revealed layers of fractured conglomerate at Visocica, while those at Pljesevica uncovered cracked sandstone plates separated by layers of silt and clay. "What he's found isn't even unusual or spectacular from the geological point of view," says geologist Robert Schoch of Boston University, who spent ten days at Visoko that summer. "It's completely straightforward and mundane."

"The landform [Osmanagich] is calling a pyramid is actually quite common," agrees Paul Heinrich, an archaeological geologist at Louisiana State University. "They're called 'flatirons' in the United States and you see a lot of them out West." He adds that there are "hundreds around the world," including the "Russian Twin Pyramids" in Vladivostok.

Apparently unperturbed by the University of Tuzla report, Osmanagich said Visocica's conglomerate blocks were made of concrete that ancient builders had poured on-site. This theory was endorsed by Joseph Davidovits, a French materials scientist who, in 1982, advanced another controversial hypothesis—that the blocks making up the Egyptian pyramids were not carved, as nearly all experts believe, but cast in limestone concrete. Osmanagich dubbed Pljesevica's sandstone plates "paved terraces," and according to Schoch, workers carved the hillside between the layers—to create the impression of stepped sides on the Pyramid of the Moon. Particularly uniform blocks and tile sections were exposed for viewing by dignitaries, journalists and the many tourists who descended on the town.

Osmanagich's announcements sparked a media sensation, stoked with a steady supply of fresh observations: a 12,000-year-old "burial mound" (without any skeletons) in a nearby village; a stone on Visocica with alleged curative powers; a third pyramid dubbed the Pyramid of the Dragon; and two "shaped hills" that he has named the Pyramid of Love and the

COLIN WOODARD *is a freelance writer living in Maine. His most recent book is* The Republic of Pirates *(Harcourt, 2007).*

Clockwise, from bottom left: Sam Osmanagich, whom Bosnians have nicknamed "Indiana Jones," leads journalists and other visitors on tours of his discoveries, including the terraced sides of the "Pyramid of the Moon" and a tunnel that he believes is part of a network that connects three pyramids. Visiting tourists can dine on pyramid-shaped pizza, stay in the Motel Pyramid of the Sun (formerly Motel Hollywood) or purchase pyramid-themed statues, wood carvings and piggy banks.

MATT LUTTON / ANARCHY IMAGES (2); MORTEN HVAAL; COLIN WOODARD; MATT LUTTON / ANARCHY IMAGES

Temple of Earth. And Osmanagich has recruited an assortment of experts whom he says vindicate his claims. For instance, in 2007, Enver Buza, a surveyor from Sarajevo's Geodetic Institute, published a paper stating that the Pyramid of the Sun is "oriented to the north with a perfect precision."

Many Bosnians have embraced Osmanagich's theories, particularly those from among the country's ethnic Bosniaks (or Bosnian Muslims), who constitute about 48 percent of Bosnia's population. Visoko was held by Bosniak-led forces during the 1990s war, when it was choked with refugees driven out of surrounding villages by Bosnian Serb (and later, Croat) forces, who repeatedly shelled the town. Today it is a bastion of support for the Bosniaks' nationalist party, which controls the mayor's office. A central tenet of Bosniak national mythology is that Bosniaks are descended from Bosnia's medieval nobility. Ruins of the 14th-century Visoki Castle can be found on the summit of Visocica Hill—on top of the Pyramid of the Sun—and, in combination, the two icons create considerable symbolic resonance for Bosniaks. The belief that Visoko was a cradle of European civilization and that the Bosniaks' ancestors were master builders who surpassed even the ancient Egyptians has become a matter of ethnic pride. "The pyramids have been turned into a place of Bosniak identification," says historian Dubravko Lovrenovic of the Bosnia and Herzegovina Commission to Preserve National Monuments. "If you are not for the pyramids, you are accused of being an enemy of the Bosniaks."

For his part, Osmanagich insists he disapproves of those who exploit his archaeological work for political gain. "Those pyramids don't belong to any particular nationality," he says. "These are not Bosniak or Muslim or Serb or Croat pyramids, because they were built at a time when those nations and religions were not in existence." He says his project should "unite people, not divide them."

Yet Bosnia and Herzegovina still bears the deep scars of a war in which the country's Serbs and, later, Croats sought to create ethnically pure small states by killing or expelling people of other ethnicities. The most brutal incident occurred in 1995, when Serb forces seized control of the town of Srebrenica—a United Nations-protected "safe haven"—and executed some 8,000 Bosniak men of military age. It was the worst civilian massacre in Europe since World War II.

Wellesley College anthropologist Philip Kohl, who has studied the political uses of archaeology, says that Osmanagich's pyramids exemplify a narrative common to the former Eastern bloc. "When the Iron Curtain collapsed, all these land and territorial claims came up, and people had just lost their ideological moorings," he notes. "There's a great attraction in being able to say, 'We have great ancestors, we go back millennia and we can claim these special places for ourselves.' In some places it's relatively benign; in others it can be malignant."

"I think the pyramids are symptomatic of a traumatized society that is still trying to recover from a truly horrendous experience," says Andras Riedlmayer, a Balkan specialist at Harvard University. "You have many people desperate for self-affirmation and in need of money."

Archaeological claims have long been used to serve political purposes. In 1912, British archaeologists combined a modern skull with an orangutan jaw to fabricate a "missing link" in support of the claim that human beings arose in Britain, not Africa. (The paleontologist Richard Leakey later noted that English elites took so much pride in "being the first, that they swallowed [the hoax] hook, line and sinker.")

More recently, in 2000, Shinichi Fujimura—a prominent archaeologist whose finds suggested that Japanese civilization was 700,000 years old—was revealed to have buried the forged artifacts he had supposedly discovered. "Fujimura's straightforward con was undoubtedly accepted by the establishment, as well as the popular press, because it gave them evidence of what they already wanted to believe—the great antiquity of the Japanese people," Michele Miller wrote in the archaeological journal *Athena Review*.

Some Bosnian scholars have publicly opposed Osmanagich's project. In April 2006, twenty-one historians, geologists and archaeologists signed a letter published in several Bosnian newspapers describing the excavations as amateurish and lacking proper scientific supervision. Some went on local television to debate Osmanagich. Bosniak nationalists retaliated, denouncing pyramid opponents as "corrupt" and harassing them with e-mails. Zilka Kujundzic-Vejzagic of the National Museum, one of the Balkans' pre-eminent archaeologists, says she received threatening phone calls. "One time I was getting onto the tram and a man pushed me off and said, 'You're an enemy of Bosnia, you don't ride on this tram,' " she recalls. "I felt a bit endangered."

"I have colleagues who have gone into silence because the attacks are constant and very terrible," says University of Sarajevo historian Salmedin Mesihovic. "Every day you feel the pressure."

"Anyone who puts their head above the parapet suffers the same fate," says Anthony Harding, a pyramid skeptic who was, until recently, president of the European Association of Archaeologists. Sitting in his office at the University of Exeter in England, he reads from a thick folder of letters denouncing him as a fool and a friend of the Serbs. He labeled the file "Bosnia—Abuse."

Bosnian-Muslim nationalists have denounced pyramid skeptics as "corrupt" and harassed them with e-mails.

IN JUNE 2006, Sulejman Tihic, then chairman of Bosnia's three-member presidency, endorsed the foundation's work. "One does not need to be a big expert to see that those are the remains of three pyramids," he told journalists at a summit of Balkan presidents. Tihic invited Koichiro Matsuura, then director-general of Unesco, to send experts to determine if the pyramids qualified as a World Heritage site. Foreign scholars, including Harding, rallied to block the move: 25 of them, representing six countries, signed an open letter to Matsuura warning that "Osmanagich is conducting a pseudo-archaeological project that, disgracefully, threatens to destroy parts of Bosnia's real heritage."

But the Pyramid Foundation's political clout appears considerable. When the minister of culture of the Bosniak-Croat Federation, Gavrilo Grahovac, blocked the renewal of foundation permits in 2007—on the grounds that the credibility of those working on the project was "unreliable"—the action was overruled by Nedzad Brankovic, then the federation prime minister. "Why should we disown something that the entire world is interested in?" Brankovic told reporters at a press conference following a visit to the site. "The government will not act negatively toward this project." Haris Silajdzic, another member of the national presidency, has also expressed support for Osmanagich's project, on grounds that it helps the economy.

Critics contend that the project not only sullies Bosnian science but also soaks up scarce resources. Osmanagich says his foundation has received over $1 million, including $220,000 from Malaysian tycoon Vincent Tan; $240,000

Travel to pyramid sites around the world at Smithsonian.com/pyramids

EFE / ZUMA PRESS

from the town of Visoko; $40,000 from the federal government; and $350,000 out of Osmanagich's pocket. Meanwhile, the National Museum in Sarajevo has struggled to find sufficient funds to repair wartime damage and safeguard its collection, which includes more than two million archaeological artifacts and hundreds of thousands of books.

Because of the war, says Harvard's Andras Riedlmayer, Bosnians are "desperate for self-affirmation."

Critics also cite the potential damage to Bosnia's archaeological heritage. "In Bosnia, you can't dig in your back garden without finding artifacts," says Adnan Kaljanac, a graduate student of ancient history at the University of Sarajevo. Although Osmanagich's excavation has kept its distance from the medieval ruins on Visocica Hill, Kaljanac worries that the project may destroy undocumented Neolithic, Roman or medieval sites in the valley. Similarly, in a 2006 letter to *Science* magazine, Schoch said the hills in Visoko "could well yield scientifically valuable terrestrial vertebrate specimens. Presently, the fossils are being ignored and destroyed during the 'excavations,' as crews work to shape the natural hills into crude semblances of the Mayan-style step pyramids with which Osmanagich is so enamored."

That same year, the Commission to Preserve National Monuments, an independent body created in 1995 by the Dayton peace treaty to safeguard historical artifacts from nationalist infighting, asked to inspect artifacts reportedly found at Osmanagich's site. According to commission head Lovrenovic, commission members were refused access. The commission then expanded the protected zone around Visoki, effectively pushing Osmanagich off the mountain. Bosnia's president, ministers and parliament currently have no authority to override the commission's decisions.

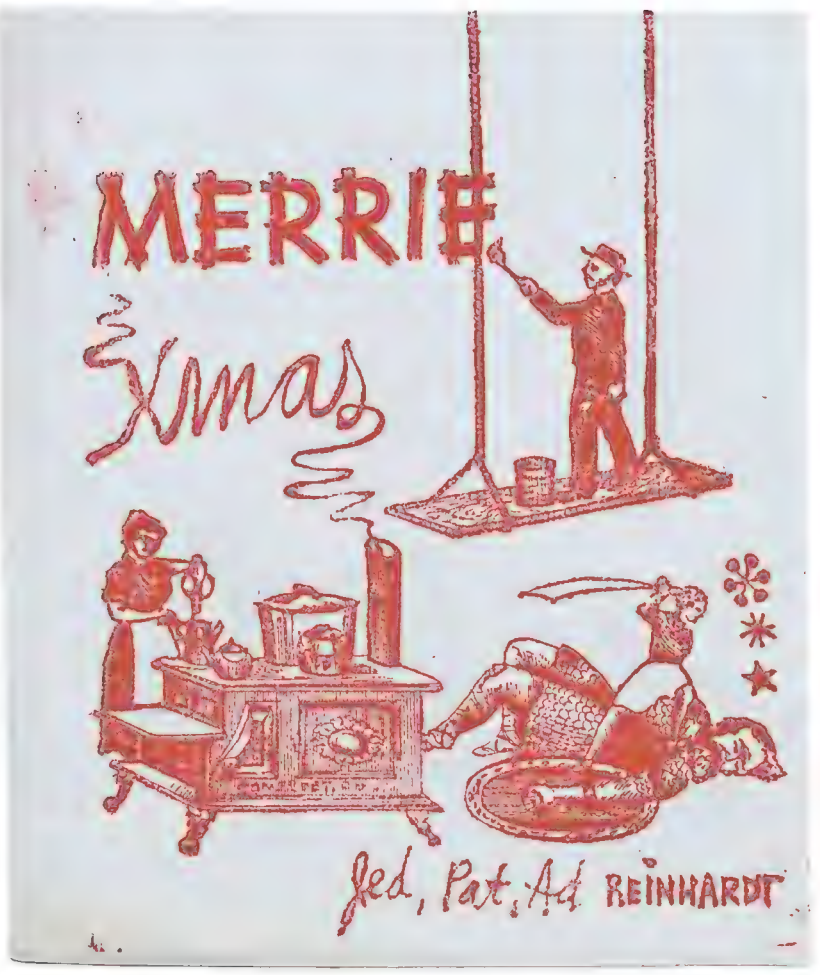
But if Osmanagich has begun to encounter obstacles in his homeland, he's had continuing success abroad. This past June, he was made a foreign member of the Russian Academy of Natural Sciences, one of whose academicians served as "scientific chairman" of the First International Scientific Conference of the Valley of the Pyramids, which Osmanagich convened in Sarajevo in August 2008. Conference organizers included the Russian Academy of Technical Sciences, Ain Shams University in Cairo and the Archaeological Society of Alexandria. This past July, officials in the village of Boljevac, Serbia, claimed that a team sent by Osmanagich had confirmed a pyramid under Rtanj, a local mountain. Osmanagich e-mailed me he had not visited Rtanj himself nor had he initiated any research at the site. However, he told the Serbian newspaper *Danas* that he endorsed future study. "This is not the only location in Serbia, nor the region, where there is a possibility of pyramidal structures," he was quoted as saying.

For now Osmanagich has gone underground, literally, to excavate a series of what he says are ancient tunnels in Visoko—which he believes are part of a network that connects the three pyramids. He leads me through one of them, a cramped, three-foot-high passage through disconcertedly unconsolidated sand and pebbles he says he is widening into a seven-foot-tall thoroughfare—the tunnel's original height, he maintains—for tourists. (The tunnel was partially filled, he says, when sea levels rose by 1,500 feet at the end of the ice age.) He points out various boulders he says were transported to the site 15,000 years ago, some of which bear carvings he says date back to that time. In an interview with the Bosnian weekly magazine *BH Dani*, Nadija Nukic, a geologist whom Osmanagich once employed, claimed there was no writing on the boulders when she first saw them. Later, she saw what appeared to her as freshly cut marks. She added that one of the foundation's workers told her he had carved the first letters of his and his children's names. (After the interview was published, Osmanagich posted a denial from the worker on his Web site. Efforts to reach Nukic have been unavailing.)

Some 200 yards in, we reach the end of the excavated portion of the tunnel. Ahead lies a tenuous-looking crawl space through the gravelly, unconsolidated earth. Osmanagich says he plans to dig all the way to Visocica Hill, 1.4 miles away, adding that, with additional donations, he could reach it in as few as three years. "Ten years from now nobody will remember my critics," he says as we start back toward the light, "and a million people will come to see what we have."

Glee Mail

A new exhibition of seasonal greetings from artists such as Alexander Calder and Philip Guston celebrates the handmade holiday card



Americans last year sent more than two billion Christmas cards, and a great many bore a familiar sentiment printed in an overseas factory and boxed for mass consumption. The more than 100 holiday cards in a new exhibition at the Smithsonian's Reynolds Center for American Art and Portraiture, each one designed by an artist for personal use, represent a fresher approach to a tradition that is for many of us, let's admit it, something of a chore. Most of the exhibition cards celebrate Christmas, while several acknowledge Hanukkah and the New Year. They were selected from the Archives of American Art's collection of artists' ephemera, which also includes journals, sales receipts and snapshots.

The thick brushstrokes and cartoon-like blazing fireplace in Philip Guston's 1970s Christmas card (opposite bottom) are unmistakably his, reminiscent of his darkly primitive renderings of hooded Ku Klux Klan members. "Right away you see that style, but it's happy," Mary Savig, one of the exhibition curators, says of the Guston image.

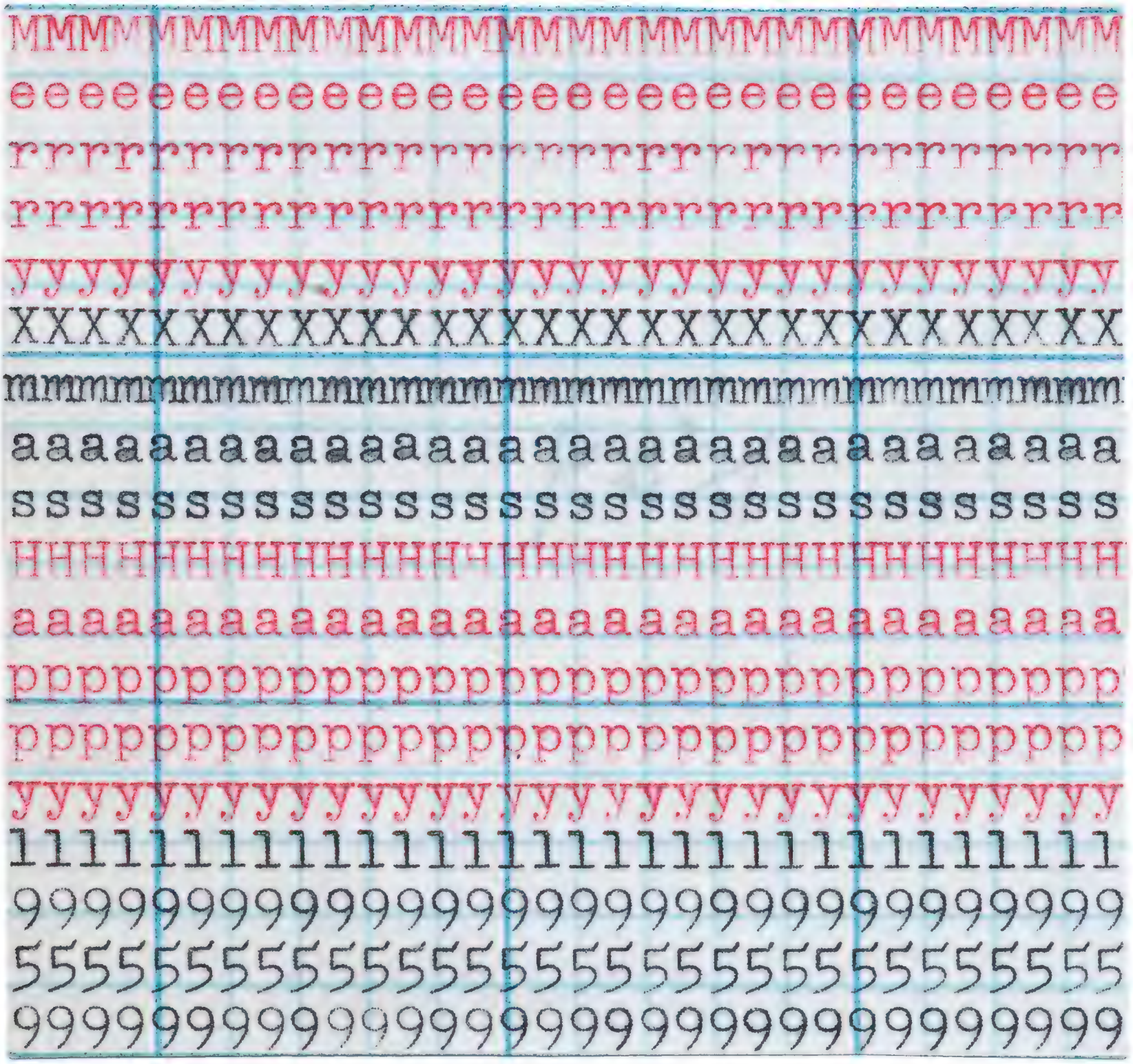
In 1929, Alexander Calder, best known for his wondrous mobiles, took time out from *Cirque Calder*, the wire-sculpture circus he showed in Paris and New York City, to create a playful linocut New Year's card (p. 61, bottom), perhaps the exhibition's most ribald season's greeting.

A 1989 card by Pablo Cano, a Miami-based Cuban-American artist known for his marionettes, depicts a dove in a swirl of blue (p. 61, top). "This would sell well," says Savig, who, as it happens, worked for a greeting-card company in Minnesota during high school. "Doves always sell well."

But the cards in this exhibition weren't about making money. They were for friends, family and maybe a gallery owner or two. Not meant for public viewing, they give us an intimate, unguarded view of artists doing what we count on artists to do: break through the canned sentiments and commercial clutter of their time to make a personal statement.

ABBY CALLARD

Long before computer-generated Santas decked the halls, artists handcrafted their own greetings. Clockwise from top left: Ad Reinhardt (1913-67), a painter, graphic designer and cartoonist, created an off-kilter block print, which is undated. A screen-printed card c. 1962 from Romanian-born Noche Crist (1909-2004) of Washington, D.C. depicts Georgetown in winter. The signature starkness of Philip Guston (1913-80) is evident in his undated watercolor of a hearth. Alexandra Darrow (1910-93) of Connecticut, known for her Works Progress Administration murals of the 1930s, was a model of yuletide cheer in a 1957 photograph.



ALL IMAGES: ARCHIVES OF AMERICAN ART, SI

See more artists' holiday greetings at Smithsonian.com/cards

The cards offer a rare glimpse of artists' personal work. Clockwise from far left: Kay Sage (1898-1963), a painter and poet, sent a whimsical typescript in 1958. Pablo Cano, noted for his Dada-based marionettes, embraced a traditional dove in 1989. Arnold Newman (1918-2006), whose photography graced *Life*, produced a collage-like image sent by him and wife Augusta. Alexander "Sandy" Calder (1898-1976) rang in 1930 with a frolicking take on a New Year's theme. Painter-educator Frederick Hammersley (1919-2009) wielded a bold touch in an undated screen print. August Arp (1894-1968) had an Art Nouveau holiday for 1923.

Life spills into the El Alto outdoor market of Puebla, where "present and past coexist and harmonize," says the author. Mariachis celebrate the *quinceañera*, a traditional coming-of-age ceremony, for 15-year-old Daniela Picaro.

Mexico's "City of Angels" is home to gilded churches and artistic treasures. It's also the nation's culinary capital, where life is enjoyed one chalupa at a time

SAVORING PUEBLA

BY FRANCINE PROSE PHOTOGRAPHS BY LANDON NORDEMAN

DESPITE (OR BECAUSE OF) ITS monumental scale, its crowded, buzzing intensity, its archaeological and political importance, Mexico City's *zócalo*, or central square, is—for all its beauty and grandeur—not the sort of place where most of us would choose to hang out: eating lunch, meeting friends, watching people go by. But a two-hour drive southeast from the capital, Puebla has at its heart a gorgeous historical center, a hundred-block showplace of Colonial and Baroque architecture. And its handsome zócalo is the gentle heart of that heart. Pause for a few moments on one of its wrought-iron benches, and you think you could stay there forever.

Lined with shady trees and cool walkways surrounding an elaborate 18th-century fountain that features a statue of the Archangel Saint Michael, the region's patron saint, the zócalo, also known as the Plaza de Armas, is endlessly entertaining. Everything seems emblematic of the ingenious ways in which present and past coexist and harmonize in this historic and modern city, home to over a million people. An old man dressed in the headdress and robes of a Mesoamerican shaman plays a flute and dances near a vendor holding a bouquet of giant balloons bearing the sunny face of SpongeBob SquarePants. Under a tent, workers inform passersby about the demands of the laborers at one of Mexico's multinational factories, while, in a distant corner, a film crew is shooting a commercial for mobile phones. A quartet of 21st-century mariachis—young

men in sunglasses, jeans and T-shirts—are practicing Beatles songs, while a pair of tiny twins chase pigeons until their parents warn them to watch out for their older sister's snowy Communion dress. In the arched porticoes surrounding the square are bookstores and shops selling stylish clothes and devotional objects, as well as restaurants and cafés at which you can spend hours, sipping coffee and nibbling *churros*, the fried crullers that may be Spain's most uncomplicatedly beneficial export to the New World.

Without leaving the confines of the zócalo, you can contemplate the facade of the city's impressive and somewhat intimidating Town Hall, and, more rewarding still, the exterior of the cathedral of Puebla, a masterpiece of Mexican ecclesiastical architecture. The building was begun in 1575 and consecrated in 1649, but the interior—decorated with carved and inlaid choir stalls, onyx statuary, immense painted altars and a gargantuan pipe organ—required several hundred more years to complete; the exuberant canopy over the central altar was finished in 1819, and changes continued to be made into the 20th century. As a consequence, the church functions as a kind of guided tour through the major styles and periods of Mexican religious architecture—Colonial, Baroque, Mannerist and neo-Classical, all assembled under one soaring cupola.

Hearing the carillon chime every day at noon in the cathedral's south tower, reputed to be the tallest in Mexico, you can almost believe the legend that the daunting engineering problem of how to install the 8.5-ton bell in the unusually high tower was miraculously solved when angels took over to help the builders. Overnight, it is said,the angels raised the bell and set it in the tower.

Indeed, angels play a major role in the religious history of Puebla, which was founded in 1531. According to one story, the city owes its location and its very existence to a dream of Fray Julián Garcés, the first bishop of Puebla, who was appointed by Pope Clement VII in 1525, four years after Hernando Cortés brought about the fall of the Aztec Empire. In the Dominican friar's vision, angels showed him exactly where the city should be constructed.

Named for angels, which are omnipresent (below), Puebla de los Angeles boasts over a million residents. Shoppers and tourists intermingle in the colonial district (bottom), which dates to the 16th century.

MAP: GUILBERT GATES

An early Mass starts the day in Puebla's cathedral, "a masterpiece of Mexican ecclesiastical architecture" begun in 1575.

The angels were not only blessedly helpful but astonishingly professional, coming equipped with string lines and surveying tools that situated the settlement, demarcated its boundaries and laid out a grid of streets designed to reflect the latest European notions of orderly urban planning. Puebla de los Angeles (City of the Angels) the town would be called. Occupying a lush valley in the shadow of a volcano, Popocatépetl, it would prove a pleasant place for the Spanish colonizers to live among the area's indigenous tribes (whose numbers had already been ravaged by the disease and bloodshed that followed the conquest) and beneath the bishop's angelic guides, fluttering beneficently over the churches that the friars and governors would build for themselves, their communities and the newly converted locals.

A less romantic explanation for the establishment of Puebla involves the colonial leaders' search for an area that would allow the settlers to own property and farm the land with a degree of success that might blunt the edge of their longing for their former lives in the Old World. Largely uninhabited, covered with a layer of fertile soil, blessed with a hospitable climate year-round, and positioned to be a convenient stopover on the route from the port of Veracruz to the Mexican capital, the spot on which Puebla would be built seemed the ideal place to realize the dream (somewhat more earthbound than Fray Garcés') of a prosperous industrial, agricultural and spiritual center that would serve as a model for others throughout New Spain. In addition, the new town would be located near the indigenous population center—and labor pool—of Cholula.

In the area immediately surrounding Puebla's zócalo, there's abundant evidence of the essential role played by one of the city's most important leaders, Juan de Palafox y Mendoza, who arrived to serve as bishop of Puebla in 1640, and, two years later, as the region's viceroy as well. Eager to see the cathedral completed, Palafox paid its building costs partly from his own pocket and presided over its consecration. In his nine years as bishop, Palafox oversaw the construction of a seminary, two colleges and 50 churches. But the true key to Palafox's character (the illegitimate son of an aristocrat, he was a reformer zealous enough to make his political superiors uneasy) can be found in the library he amassed, which can still be visited, directly across the street from the back entrance to the cathedral.

With its arched and vaulted ceiling, scalloped Baroque windows, tiered balconies, gilded altar, carved-and-polished wood-

---

FRANCINE PROSE'*s most recent book is* Anne Frank: The Book, the Life, the Afterlife. **LANDON NORDEMAN** *previously photographed Elvis impersonators for* SMITHSONIAN.

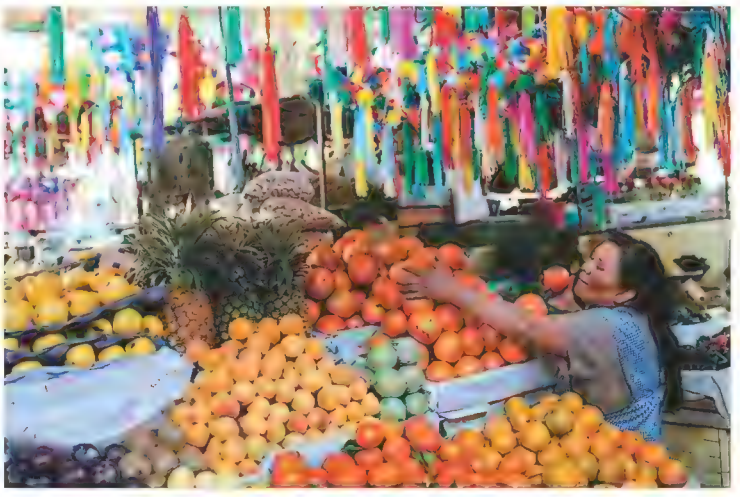
en bookcases and huge, ancient volumes made of vellum, the Biblioteca Palafoxiana suggests a real-life version of Harry Potter's library of magic spells. The soaring space is moving as well as beautiful; it evokes all the reverence and hunger for learning, for books, and what books can contain, that inspired the most high-minded of the colonial settlers to introduce the best aspects of the Renaissance to the New World. The library's elegance and power trump whatever qualms one might have about admiring the culture that an occupying country imposed on the colonized, whose own culture was underrepresented in the 50,000 volumes on Bishop Palafox's shelves. Ultimately, entering the hushed and stately institution reminds you of all the ways in which libraries, especially beautiful libraries, can be as transporting and spiritual as cathedrals.

Like the rest of Mexico, Puebla has had a troubled history marked by war, invasions and revolutions. Several important military confrontations took place there, most famously the Battle of the Fifth of May, *Cinco de Mayo*, commemorated in a holiday that has assumed great significance for Mexicans living outside their own country. At the battle, which occurred not far from Puebla's center, on May 5, 1862, the Mexican Army defeated the French with the aid of local troops. Unfortunately, the French returned a year later and smashed the Mexican forces and occupied Mexico until they were defeated by Benito Juárez in 1867.

Puebla's aristocratic upper class, which still maintains familial and cultural connections to Spain, lives side by side with a rapidly growing middle class, while many of the city's desperately poor residents inhabit its sprawling, ever-expanding margins. The capital of Mexico's Puebla state, the city is widely regarded as politically conservative and religious, its people deeply tied to tradition and to the church.

Perhaps coincidentally, Puebla is home to several of the marvels of Mexican Catholicism—not only the massive cathedral, but also the Rosario Chapel, located to the left of the central altar in the Church of Santo Domingo. Described by a visitor in 1690 as the "Eighth Wonder of the World," the chapel is so thickly decorated—so heavily populated with statues of angels, saints and virgin martyrs and figures symbolizing faith, hope and charity—and, above all, so artfully and generously splashed with gold that to stand beneath its dome is not just metaphorically, but quite literally, dazzling. The density of detail and form is so over-the-top that you can only experience it a little at a time, so that photographs (no flash, please) are useful reminders that the gilded splendor could in fact have been as ornate and exuberant as you recall.

A shot or two of raisin-flavored liqueur (below) at La Pasita "calms one's sorrow" and eases visitors' transition to Puebla's vibrant streets, where fresh fruit, piñatas and religious paintings sustain body and soul (bottom and opposite). The gilded scrollwork, carved doorways and pastels of Mesón Sacristía de la Compañía, a boutique hotel (opposite top), recall the city's colonial era.



Aside from the governors and priests who worked to establish and maintain control of the city, the most influential of the early Spanish immigrants to Puebla were a deceptively humble delegation of potters and ceramicists from the Spanish town of Talavera de la Reina. Even as the politicians and friars labored to govern Puebla's civic and spiritual life, these brilliant craftsmen addressed themselves to its vibrant, glittering surface.

Enthusiasts of tile and tile-covered-buildings (I'm one of them) will be as blissful in Puebla as in Lisbon or southern Spain. The streets of the downtown area are lively, but not so crowded or pressured that you can't stop and gaze up at the sunlight bouncing off ceramic patterns of clay colored blue, brown and Nile green, or at the figures (wicked caricatures of the enemies of the home's original owner) baked into the exterior of the 17th-century Casa de los Muñecos. The effect can suggest elements of Moorish, Aztec and Art Nouveau styles. The nearer one gets to the zócalo, the better maintained the buildings are, but farther out, where the tiled facades are more frequently hidden behind electronics stores, taco stands, the studios of wedding and graduation photographers and outposts of OXXO, the Mexican equivalent of 7-Eleven, the dwellings take on a slightly crumbling melancholy.

A lighthearted, carefree, almost reckless enthusiasm informs the decoration of many of these structures, in which the hand of the individual craftsman (or artist, depending on your point of view) is everywhere in evidence. The name of the Casa del Alfeñique, a beautiful 18th-century building that houses a museum of the history of the region, translates roughly as the "house of the egg-white confection," something resembling meringue.

In 1987, Unesco designated Puebla a World Heritage site, noting that the city contains approximately 2,600 historic

buildings. It would be easy to spend weeks in the central historic district, taking time for each lovingly preserved colonial wooden door, each plaster angel, each curlicue and trellis, each vaulted courtyard leading to a shaded patio—a hidden oasis just a few steps off the sunny street. The sheer variety of food shops—from open-air fish stalls to ice-cream parlors where you can sample avocado, chile and other unexpected flavors—reminds you of what it was like to inhabit a highly functioning but pre-corporate metropolis, before so much of urban life was blighted either by the middle-class flight from the inner city, or, alternately, by the sort of gentrification that has given so many streetscapes the predictability and sameness of a high-end mall.

Likewise, Puebla reminds you that cities can still be centers of communal as well as commercial life. Proud of their town, of its history and its individuality, its residents see their home as a place to be enjoyed, not merely as a hub in which to work and make money. There's a broad span of cultural activities—from concerts at the stately 18th-century Teatro Principal to the Monday-night *Lucha Libre* fights at the main arena, where masked wrestlers throw one another around before a roaring crowd. On weekends, Poblano families stroll through the flea market in the pleasant Plazuela de los Sapos, where vendors sell goods ranging from old jewelry, religious pictures and vintage postcards to purses woven from candy wrappers and belts made from beer-can tops.

At the top of the Plazuela de los Sapos is one of Puebla's most beloved institutions, the charming La Pasita, manufacturer of the eponymous sweet, walnut-brown liqueur, tasting of raisins, made from local fruit and known throughout Mexico. A tiny, stand-up bar with only a few seats, La Pasita also sells a selection of other dessertlike but surprisingly powerful drinks, flavored with coconut, ginger or anise, and served in shot glasses together with wedges of cheese. Founded in 1916, the store is open only for a few hours in the afternoon, and it's a temptation to spend those hours getting sweetly looped and finding yourself increasingly interested in La Pasita's unique décor, the shelves covered with bric-a-brac from all over the world—images of movie stars and historical figures, toys and playing cards. A poster of a young woman reads "*Pasita calmó su pena*" ("Pasita calmed her sorrow"), and you can't help thinking that, over the course of almost a century, this delightful bar has helped its customers do exactly that.

For travelers who want to spend at least some of their time in Puebla doing something beside relaxing in the zócalo, exclaiming over the extravagantly tiled buildings, visiting churches and drinking candylike liqueur, the city offers a wide variety of museums.

Opened in 1991, the elegantly designed Museo Amparo occupies two Colonial buildings combined to display an extraordinary private collection of pre-Columbian and Colonial art. It's one of those gemlike museums (Houston's Menil Collection comes to mind) in which every object seems to have been carefully and consciously selected with an eye for its uniqueness and aesthetic perfection, so that even visitors who imagine that they are familiar with the wonders of Mesoamerican culture will find themselves catching their breath as they move from one dramatically lit gallery to another, past vitrines displaying artifacts that include a sensitively rendered Olmec figure reminiscent of Rodin's *Thinker*, expressive stone masks, realistic sculptures of animals (a dog with an ear of corn in its mouth is especially striking) and others that could almost persuade you of the existence of the most fanciful and unlikely creatures, as well as all manner of objects relating to rituals, games, mythology and scientific and astrological calculation.

If I had to choose just one museum to visit in Puebla, it would be the Amparo, but with just a bit more time, I'd reserve some for the former convents of Santa Monica and Santa Rosa, not far from each other, and both an easy walk from the zócalo. Built in the early 17th century to surround one of the loveliest tiled courtyards in a city of gorgeous courtyards, the museum in the former convent of Santa Monica illuminates the cloistered existence of Mexican nuns—most notably in the decades that began in the mid-19th century, when the government officially banned monasteries and convents, forcing monks and nuns to continue living there in secret. In the dark maze of narrow corridors, hidden chapels, a spiral staircase leading down into subterranean chambers and almost shockingly spare cells, it seems possible to inhale the

Puebla, which sits in the shadow of Popocatépetl (above right), has a troubled history marked by war. Benito Juárez (top: photo at flea market) routed French invaders in 1867. Mesoamericans created statuettes (above left: at Amparo Museum). Modern combatants suit up for Monday night wrestling bouts, while bullfighters prepare for the ring (opposite).

BOTTOM RIGHT: ULISES RUIZ / EPA / CORBIS

PLAZA DE
TOROS
AL TORO 314 "CONTADOR" DE 500 KGS.

atmosphere of secrecy and seclusion that the sisters breathed. A collection of (I suppose one could say) *jewelry* designed for self-mortification—belts studded with nails, bracelets fashioned from barbed wire—testifies to the extremes of penance that these devout women practiced. Yet elsewhere throughout the museum are abundant examples of the fantastic inventiveness and creativity that the women poured into the lace, embroidery and religious objects that they fashioned to fill the long hours of their contemplative lives.

Things are a bit brighter and more cheerful at the former convent of Santa Rosa, where the finest examples of Mexican crafts—pottery, masks, costumes, paper cutouts (including one of a slightly demonic Donald Duck), painted carousel animals and so forth—have been gathered from all over the country. My favorite section features a group of wooden armatures designed to launch displays of fireworks that, when lit, trace the fiery outlines of an elephant or a squirrel. But the museum is rightfully proudest of the former convent's kitchen. The glorious *cocina* is not only one of the city's best examples of Talavera tilework but, according to popular legend, the place where the resourceful nuns coped with the stressful prospect of a surprise visit from the bishop by combining the ingredients on hand and in the process invented the richly spicy, chocolate-infused, sesame-inflected sauce—mole poblano—that is now the region's most well-known dish.

The mention of mole poblano brings up yet another—and one of the most compelling—reasons to visit Puebla: its food. I've heard the city described as the Lyon of Mexico, and while it may be true that its cooking is the best in all of Mexico (as Poblanos claim), the comparison to Lyon would hold only if the five-star restaurants of the French culinary capital reconstituted themselves as open-air stands selling foie gras cooked over hot plates or charcoal braziers. There are good restaurants in Puebla, and it's useful to seek one out if you are there in summer, when it's possible to sample Puebla's second most famous contribution to its country's cuisine, *chiles en nogada*, peppers stuffed with meat and fruit, covered with a creamy

Puebla's most seductive culinary innovation is mole poblano, a rich, spicy chocolate sauce credited to the nuns of the Santa Rosa Convent (below). Its museum is known for handicrafts (bottom: traditional cookware).

Listen to traditional mariachi music at Smithsonian.com/puebla

Puebla comprises a showplace of Baroque and Colonial architecture. "You think you could stay there forever," says the author.

walnut sauce and dotted with pomegranate seeds, so that its red, white and green colors are said to patriotically evoke those of the Mexican flag.

But in most cases, it is widely agreed, street food trumps fine dining. Generally speaking, the most reliable ways to find the best food are, first, to follow your nose, and second, to fall into place at the end of the longest line.

Several of these lines can be found every day at lunchtime a block or two west of the Biblioteca Palafoxiana, where Poblanos queue up for *molotes*, deep-fried turnovers made from corn tortillas stuffed with a choice of cheese, *tinga* (a mixture of shredded meat, chiles, tomatoes, onions and spices), sausage, and, in season, the delicious *huitlacoches*, or corn fungus. Throughout the city are small places specializing in *cemitas*, overstuffed sandwiches constructed on grilled, split sesame rolls, and *tacos arabes*, wheat tortillas filled with meat carved from a turning rotisserie column; both of these hearty snacks may have borrowed their names from the waves of Lebanese immigrants (cemitas may be related to the word for Semite) who arrived in Mexico beginning in the 1880s.

But by far my favorite destination for a Puebla night out is the Feria del Carmen, which takes place every July in the Jardin del Carmen, a few blocks from the zócalo along the Avenue 16 de Septiembre. The fair, which commemorates the feast day of Our Lady of Carmen, is an old-fashioned carnival of the sort you hardly see anymore north of the border, funkier and more earthy than anything you're likely to find at the most authentic, old-school county fair. If you're brave and trusting enough, you can ride a creaky Ferris wheel or let yourself be spun vertiginously in a scarily vintage whirligig, and, if you have a strong stomach, you can visit one of the forlorn sideshows.

But the major attraction of the feria—what draws Poblanos here—is the food. Under strings of bright-colored lights, women tend huge circular grills on which *chalupas poblanas* (mini-tortillas topped with red or green salsa) sizzle. A family sells plastic foam cups of *esquites*—corn kernels spiced with chile powder and other pungent Mexican herbs, then sprinkled with lime juice and cheese. When you tire of navigating the crowds and waiting in line to be served, you can sit at a table under a tent and have the proprietor bring you plates of *huaraches* (handmade tortillas stuffed with steak that resemble—in shape, and occasionally, in durability—the sandals after which they're named) or *pambazos*, fried bread filled with meat and topped with lettuce, cream and salsa.

Everything is so attractive and delicious, and it's all so much fun, it's hard to admit to yourself that you've reached the saturation point. Fortunately, you can walk off some of that sufficiency on the way back to the zócalo, where you can rest, watch people pass by, listen to the roving street musicians and enjoy all the sights and sounds of a balmy evening in Puebla.

Geladas (a male and female in the Simien Mountains) signal their status with the livid skin on their chests: dark pink conveys dominance. To avoid hyenas and leopards, the nimble primates sleep on narrow cliff ledges.

ETHIOPIA'S EXOTIC MONKEYS

In the war-ravaged highlands, a flamboyant, little-known primate is accessible to researchers eager to chronicle its complex social life

BY ABIGAIL TUCKER **PHOTOGRAPHS BY ANUP SHAH AND FIONA ROGERS**

A male gelada that controls a harem must defend his supremacy (above: a leader bares his teeth at rivals). An unattached male (opposite: the pale skin patch at his throat indicates he's not currently mating with females) often gangs up with other bachelors to challenge vulnerable leaders. Fights can last for days. "When the bachelors are done eating, they become bored and want to cause trouble," says Jacinta Beehner, who studies behavior in gelada herds (left), among the largest nonhuman primate communities.

Geladas are isolated, oddball monkeys

that science has largely overlooked. They live in large herds in the towering Simien Mountains of northern Ethiopia. A few researchers studied the primates in the 1970s, but famine and political turmoil in the region made further investigations impossible. "Almost no one's heard of geladas," says Jacinta Beehner, a University of Michigan biological anthropologist in the midst of a ten-year gelada study, the most extensive ever conducted. "They kind of got lost in the shuffle."

Yet—if you don't mind heights—geladas (*Theropithecus gelada*) make intriguing research subjects. With their falsetto cries, explosive barks and soft grunts, geladas have one of the most varied vocal repertoires of all the primates. The noisy herds are relatively easy to follow. Unlike most monkeys, geladas graze primarily on grass. They are usually observable—except at night, when they disappear over the edges of cliffs to sleep on tiny ledges, safe from leopards and hyenas.

Geladas are visually striking, with burning eyes and leathery complexions. Males have vampiric canines, which they frequently bare at each other, and their golden manes are the stuff of shampoo commercials. "They cry out to be photographed," says Fiona Rogers. She and her partner, Anup Shah, visited Beehner's camp in Simien Mountain National Park for a month to photograph the animals.

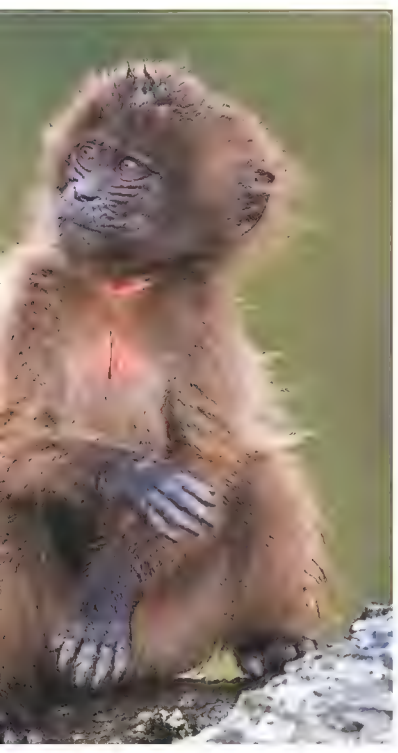
Male geladas are the size of large dogs, weighing 50 to 60 pounds. Females are about half as big. Both sexes have a bald, hourglass-shaped patch of skin on their chests that telegraphs a male's social status and a female's reproductive stage. Depending on hormone levels, the color ranges from meek eraser pink to fiery red. Males' patches are brightest during their sexual prime, Beehner and her husband, University of Michigan biologist Thore Bergman, have found, and females' chest patches blister when they are in estrus. (They are also called "bleeding-heart baboons," though they are actually monkeys.)

MAP: GUILBERT GATES

Geladas favor soft, protein-rich fescue grasses, shoveling away with both hands for hours each day. Their fiber-heavy food generates plentiful stool samples, another reason Beehner loves working with them; analysis of their feces can reveal hormone levels. But their eating habits don't doom them to dull lives. "A lot of people talk about vegetarian primates as being boring, because they just sit around and digest all day," Beehner says. Not geladas. They are always signaling and communicating with each other. "It really is one big soap opera," she says.

Beehner's focus is the evolution of social behavior, and geladas are very social. Herds can be enormous—up to 1,200 individuals. But most interactions occur within a harem, composed of a leader male, two to a dozen females and their young. The females are related to each other, and they sometimes turn on the leader if he is grooming them insufficiently, not protecting them or otherwise shirking his duties.

Groups of sullen-looking bachelor monkeys lurk outside the herds. These juveniles are similar to adolescent street gangs, and Chadden Hunter, an Australian researcher who began studying geladas in the late 1990s, dubbed two such groups the "Sharks"



Though dominant males have privileges, primarily access to mates (above: a female grooms a reclining male), sisterhood is powerful in its own way. "The females in these harems are all sisters and cousins and mothers and aunts," says Beehner. "They have a bond. If they don't like a male, they will evict him." Babies (opposite and left: 1-year-olds at play) are dependent on their mothers for two years. Young males venture away from the group for a few hours at a time after age 4 and depart at 6; females never leave the harem.

and the "Jets," à la *West Side Story*. Fiona Rogers took such a liking to the bachelors' hangdog looks that her partner says he felt a stab of jealousy. "I was a little worried," Shah says.

Every so often, a leader male, herding his harem and emitting high squeals, challenges a bachelor, which responds with a "roar bark." According to protocol, the leader tears around, raising a miniature dust storm, with the bachelor in pursuit. The ritual concludes when the leader leaps into a tree, rattles the branches and shrieks "Yeow-Yeow-Yeow!" The bachelor skulks away. "They are showing how strong and fit they are," Beehner says. "It's all about showmanship."

But woe to the leader whose posturing is not persuasive. Eventually a bachelor gang targets a harem to take over, and then, Beehner says, the fighting turns ugly. Young gangsters take turns chasing and tiring out the leader until a bachelor contender steps forward. A gladiatorial battle ensues—with hair pulling, scratching and biting—sometimes leaving one animal mortally wounded.

Beehner remembers one fight that lasted three days. (The leader male prudently took breaks to pay court to his females.) It appeared to be a stalemate until a treacherous female edged away from the harem. As her champion looked on, she sidled up to the bachelor. The leader male "didn't even try to prevent it," Beehner recalls. "He just quit."

Bergman, an expert in primate vocalization and cognition, has been recording the leader males' triumphant triple "Yeow" to see how the yell degrades over time, signaling weakness to bachelors.

A deposed leader may be allowed to stay with a harem, where he cares for the young but loses mating rights, taking on a sort of avuncular role. Within a few months of being dethroned, the flaming redness of his chest patch subsides to an anemic pink.

The gelada is the only species remaining from a lineage of grazing primates once more common than baboons, says Robin Dunbar, who studied geladas in the 1970s. Its predecessors began disappearing a million years ago when the climate warmed. Palatable grasses began growing only at much higher altitudes, the monkeys shifted their range or starved, and now, Dunbar says, "we have only this one species on the tops of the mountains."

Today, with Ethiopia's 1974 to 1991 civil war concluded and the government stabilized, the northern mountains are accessible to researchers once again. And the local economy is picking up. Goats, cows and sheep compete with the monkeys for grass in alpine pastures, and farmers sometimes kill geladas that plunder barley crops. It's not clear how many geladas there are. Dunbar's estimates from the 1970s put the population at 100,000 to 200,000, but much land has been converted to farms since then. Roaming herds and rugged terrain make counting difficult, but Beehner, who has done surveys of her own, worries that the current figure is much lower—perhaps as few as 20,000.

Beehner and Bergman are also studying herd structure. Although the monkeys spend hours socializing within their harems—especially while sunbathing in the morning—they tend not to know their neighbors in the herd. The bachelor gangs notwithstanding, Beehner says, "it's a little like humans in the suburbs."

ABIGAIL TUCKER *is a staff writer for* SMITHSONIAN. **ANUP SHAH** *and* **FIONA ROGERS** *live in Kenya and London; Shah's photographs appeared in a 2006* SMITHSONIAN *story about wildebeests in the Serengeti.*

The Waldseemüller map, printed in 1507, depicted the New World in a new way—"surrounded on all sides by the ocean," in the words of

PUTTING AMERIC

an accompanying book—and named the continent for the Florentine merchant who had sailed down its eastern coast.

CA ON THE MAP

A new book tells how—and why—two 16th-century German scholars boldly named the new continent. Their extraordinary leap would forever change the way people envisioned the world

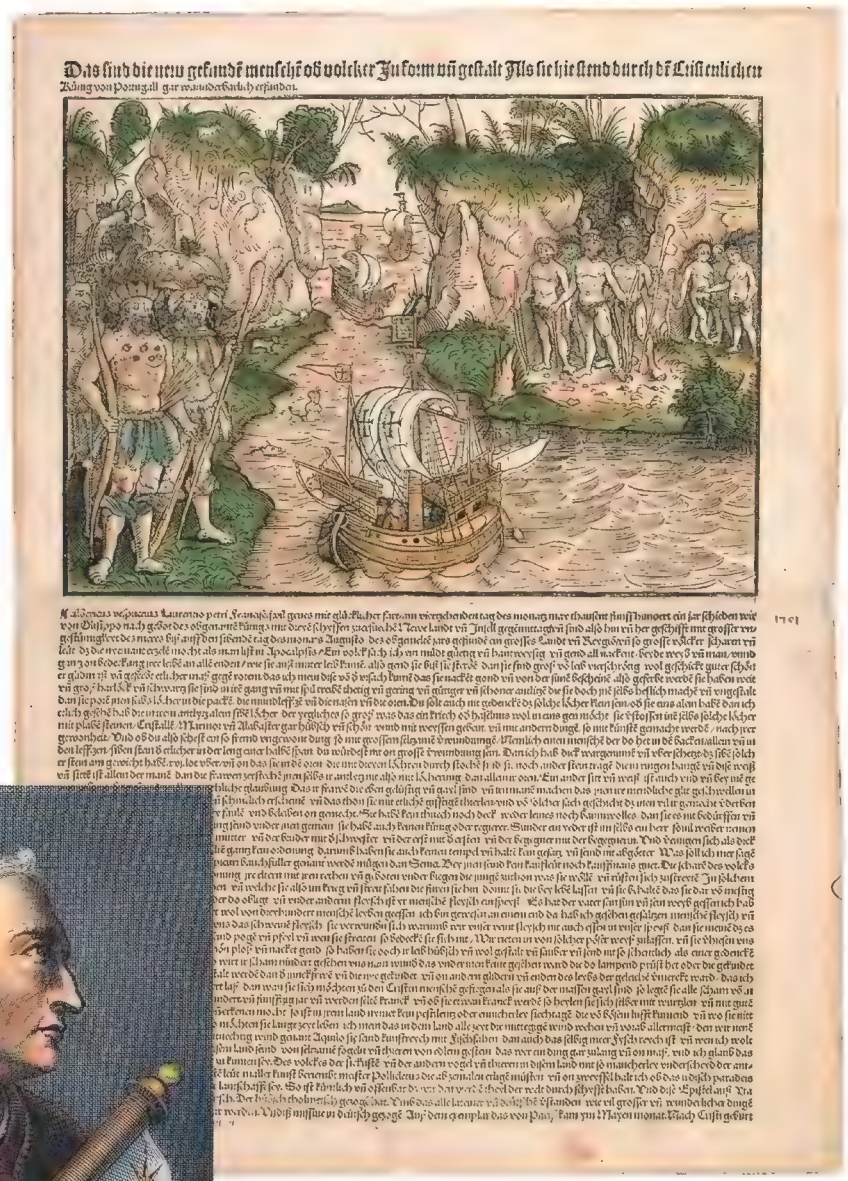
BY TOBY LESTER

It was a curious little book. When a few copies began resurfacing, in the 18th century, nobody knew what to make of it. One hundred and three pages long and written in Latin, it announced itself on its title page as follows:

INTRODUCTION TO COSMOGRAPHY
WITH CERTAIN PRINCIPLES OF GEOMETRY AND
ASTRONOMY NECESSARY FOR THIS MATTER

ADDITIONALLY, THE FOUR VOYAGES OF
AMERIGO VESPUCCI

A DESCRIPTION OF THE WHOLE WORLD ON BOTH
A GLOBE AND A FLAT SURFACE WITH THE INSERTION
OF THOSE LANDS UNKNOWN TO PTOLEMY
DISCOVERED BY RECENT MEN


Das sind die new gefundē menschē oß volcker Jnsorm uñ gestalt Als sie hie stend durch dē Künstenlichen
König von Portugall gar wunderbarlich erfunden.

Amerigo Vespucci (left: in an 1815 portrait) sailed down the coast of South America believing it to be "the eastern part of Asia." But a letter written in his name (above) said he had discovered a new land.

The book—known today as the *Cosmographiae Introductio,* or *Introduction to Cosmography*—listed no author. But a printer's mark recorded that it had been published in 1507, in St. Dié, a town in eastern France some 60 miles southwest of Strasbourg, in the Vosges Mountains of Lorraine.

The word "cosmography" isn't used much today, but educated readers in 1507 knew what it meant: the study of the known world and its place in the cosmos. The author of the *Introduction to Cosmography* laid out the organization of the cosmos as it had been described for more than 1,000 years: the Earth sat motionless at the center, surrounded by a set of giant revolving concentric spheres. The Moon, the Sun and the planets each had their own sphere, and beyond them was the firmament, a single sphere studded with all of the stars. Each of these spheres wheeled grandly around the Earth at its own pace, in a never-ending celestial procession.

All of this was delivered in the dry manner of a textbook. But near the end, in a chapter devoted to the makeup of the Earth, the author elbowed his way onto the page and made an oddly personal announcement. It came just after he had introduced readers to Asia, Africa and Europe—the three parts of the world known to Europeans since antiquity. "These parts," he wrote, "have in fact now been more widely explored, and a fourth part has been discovered by Amerigo Vespucci (as will be heard in what follows). Since both Asia and Africa received their names from women, I do not see why anyone should rightly prevent this [new part] from being called Amerigen—the land of Amerigo, as it were—or America, after its discoverer, Americus, a man of perceptive character."

How strange. With no fanfare, near the end of a minor Latin treatise on cosmography, a nameless 16th-century author briefly stepped out of obscurity to give America its name—and then disappeared again.

Those who began studying the book soon noticed something else mysterious. In an easy-to-miss paragraph printed on the back of a foldout diagram, the author wrote, "The purpose of this little book is to write a sort of introduction to the whole world that we have depicted on a globe and on a flat surface. The globe, certainly, I have limited in size. But the map is larger."

Various remarks made in passing throughout the book implied that this map was extraordinary. It had been printed on several sheets, the author noted, suggesting that it was unusually large. It had been based on several sources: a brand-new letter by Amerigo Vespucci (included in the *Introduction to Cosmography*); the work of the second-century Alexandrian geographer Claudius Ptolemy; and charts of the regions of the western Atlantic newly explored by Vespucci, Columbus and others. Most significant, it depicted the New World in a dramatically new way. "It is found," the author wrote, "to be surrounded on all sides by the ocean."

This was an astonishing statement. Histories of New World discovery have long told us that it was only in 1513—

Adapted from *The Fourth Part of the World*, by Toby Lester. © 2009 Toby Lester. Published by the Free Press. Reproduced with permission.

AKG-IMAGES; GRANGER COLLECTION, NEW YORK; PP. 78-79 GEOGRAPHY AND MAP DIVISION, LIBRARY OF CONGRESS

Working from Portuguese nautical data and falsified Vespucci letters, Matthias Ringmann and Martin Waldseemüller (above and right: in portraits from 1878-79) made a leap that Vespucci hadn't, concluding that he had seen a "fourth part" of the world, equivalent to Europe, Asia and Africa.

FROM A PAINTING BY GASTON SAVE / WIKIPEDIA COMMONS; UNIVERSIDAD DE LAS AMÉRICAS, PUEBLA, MEXICO

after Vasco Núñez de Balboa had first caught sight of the Pacific by looking west from a mountain peak in Panama—that Europeans began to conceive of the New World as something other than a part of Asia. And it was only after 1520, once Magellan had rounded the tip of South America and sailed into the Pacific, that Europeans were thought to have confirmed the continental nature of the New World. And yet here, in a book published in 1507, were references to a large world map that showed a new, fourth part of the world and called it America.

The references were tantalizing, but for those studying the *Introduction to Cosmography* in the 19th century, there was an obvious problem. The book contained no such map.

Scholars and collectors alike began to search for it, and by the 1890s, as the 400th anniversary of Columbus' first voyage approached, the search had become a quest for the cartographical Holy Grail. "No lost maps have ever been sought for so diligently as these," Britain's *Geographical Journal* declared at the turn of the century, referring both to the large map and the globe. But nothing turned up. In 1896, the historian of discovery John Boyd Thacher simply threw up his hands. "The mystery of the map," he wrote, "is a mystery still."

ON MARCH 4, 1493, seeking refuge from heavy seas, a storm-battered caravel flying the Spanish flag limped into Portugal's Tagus River estuary. In command was one Christoforo Colombo, a Genoese sailor destined to become better known by his Latinized name, Christopher Columbus. After finding a suitable anchorage site, Columbus dispatched a letter to his sponsors, King Ferdinand and Queen Isabella of Spain, reporting in exultation that after a 33-day crossing he had reached the Indies, a vast archipelago on the eastern outskirts of Asia.

The Spanish sovereigns greeted the news with excitement and pride, though neither they nor anybody else initially assumed that Columbus had done anything revolutionary. European sailors had been discovering new islands in the Atlantic for more than a century—the Canaries, the Madeiras, the Azores, the Cape Verde islands. People had good reason, based on the dazzling variety of islands that

The search had become a quest for the cartographical Holy Grail. . . . In 1896, the historian of discovery John Boyd Thacher simply threw up his hands. "The mystery of the map," he wrote, "is a mystery still."

dotted the oceans of medieval maps, to assume that many more remained to be found.

Some people assumed that Columbus had found nothing more than a few new Canary Islands. Even if Columbus had reached the Indies, that didn't mean he had expanded Europe's geographical horizons. By sailing west to what appeared to be the Indies (but in actuality were the islands of the Caribbean), he had confirmed an ancient theory that nothing but a small ocean separated Europe from Asia. Columbus had closed a geographical circle, it seemed—making the world smaller, not larger.

But the world began to expand again in the early 1500s. The news first reached most Europeans in letters by Amerigo Vespucci, a Florentine merchant who had taken part in at least two voyages across the Atlantic, one sponsored by Spain, the other by Portugal, and had sailed along a giant continental landmass that appeared on no maps of the time. What was sensational, even mind-blowing, about this newly discovered land was that it stretched thousands of miles beyond the Equator to the *south*. Printers in Florence jumped at the chance to publicize the news, and in late 1502 or early 1503 they printed a doctored version of one of Vespucci's letters, under the title *Mundus Novus*, or *New World*, in which he appeared to say

With no fanfare, near the end of a minor Latin treatise on cosmography, a nameless 16th-century author briefly stepped out of obscurity to give America its name—and then disappeared again.

that he'd discovered a new continent. The work quickly became a best seller.

"In the past," it began, "I have written to you in rather ample detail about my return from those new regions . . . and which can be called a new world, since our ancestors had no knowledge of them, and they are entirely new matter to those who hear about them. Indeed, it surpasses the opinion of our ancient authorities, since most of them assert that there is no continent south of the equator. . . . [But] I have discovered a continent in those southern regions that is inhabited by more numerous peoples and animals than in our Europe, or Asia or Africa."

This passage has been described as a watershed moment in European geographical thought—the moment at which a European first became aware that the New World was distinct from Asia. But "new world" didn't necessarily mean then what it means today. Europeans used it regularly to describe any part of the known world that they had not previously visited or seen described. In fact, in another letter, unambiguously attributed to Vespucci, he made clear where he thought he had been on his voyages. "We concluded," he wrote, "that this was continental land—which I esteem to be bounded by the eastern part of Asia."

In 1504 or so, a copy of the *New World* letter fell into the hands of an Alsatian scholar and poet named Matthias Ringmann. Then in his early 20s, Ringmann taught school and worked as a proofreader at a small printing press in Strasbourg, but he had a side interest in classical geography—specifically, the work of Ptolemy. In a work known as the *Geography*, Ptolemy had explained how to map the world in degrees of latitude and longitude, a system he had used to stitch together a comprehensive picture of the world as it was known in antiquity. His maps depicted most of Europe, the northern half of Africa and the western half of Asia, but they didn't, of course, include all the parts of Asia visited by Marco Polo in the 13th century, or the parts of southern Africa discovered by the Portuguese in the latter half of the 15th century.

When Ringmann came across the *New World* letter, he was immersed in a careful study of Ptolemy's *Geography*, and he recognized that Vespucci, unlike Columbus, appeared to have sailed south right off the edge of the world that Ptolemy had mapped. Thrilled, Ringmann printed his own version of the *New World* letter in 1505—and to emphasize the southness of Vespucci's discovery, he changed the work's title from *New World* to *On the Southern Shore Recently Discovered by the King of Portugal*, referring to Vespucci's sponsor, King Manuel.

Explore the Waldseemüller map in greater detail at Smithsonian.com/worldmap

PP. 82-83 JAY I. KISLAK COLLECTION, RARE BOOK AND SPECIAL COLLECTIONS DIVISION, LIBRARY OF CONGRESS / JAY I. KISLAK FOUNDATION MIAMI LAKES, FLORIDA

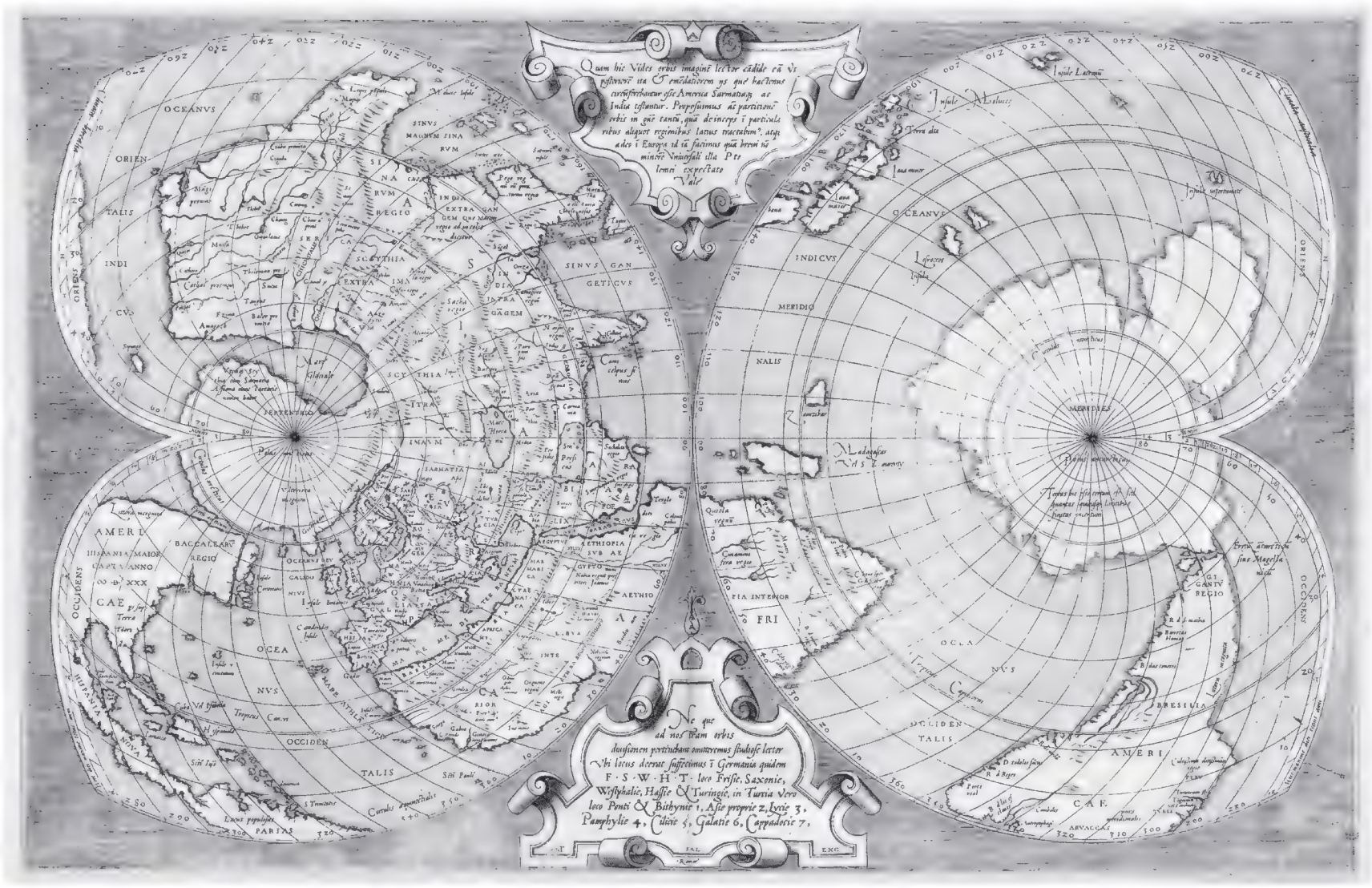
Waldseemüller did not use "America" on maps he made after 1507 (above: his Carta Marina, from 1516). But once Gerardus Mercator applied the name to the entire continent in 1538, others followed suit, as in a mid-16th-century map (below).

Not long afterward, Ringmann teamed up with a German cartographer named Martin Waldseemüller to prepare a new edition of Ptolemy's *Geography*. Sponsored by René II, the Duke of Lorraine, Ringmann and Waldseemüller set up shop in the little French town of St. Dié, in the mountains just southwest of Strasbourg. Working as part of a small group of humanists and printers known as the Gymnasium Vosagense, the pair developed an ambitious plan. Their edition would include not only 27 definitive maps of the ancient world, as Ptolemy had described it, but also 20 maps showing the discoveries of modern Europeans, all drawn according to the principles laid out in the *Geography*—a historical first.

Duke René seems to have been instrumental in inspiring this leap. From unknown contacts he had received yet another Vespucci letter, also falsified, describing his voyages and at least one nautical chart depicting the new coastlines explored to date by the Portuguese. The letter and the chart confirmed to Ringmann and Waldseemüller that Vespucci had indeed discovered a huge unknown land across the ocean to the west, in the Southern Hemisphere.

What happened next is unclear. At some time in 1505 or 1506, Ringmann and Waldseemüller decided that the land Vespucci had explored was *not* a part of Asia. Instead, they concluded that it must be a new, fourth part of the world.

Temporarily setting aside their work on their Ptolemy atlas, Ringmann and Waldseemüller threw themselves into the production of a grand new map that would introduce Europe to this new idea of a four-part world. The map would



NORMAN B. LEVENTHAL MAP CENTER, BOSTON PUBLIC LIBRARY

GIFT GUIDE

NEW! Vantage Vue Weather Station

Rugged. Accurate. Reliable. And a Great Price.

ISO 9001 CERTIFIED COMPANY

An easy-to-install station from the company that sets the standard in quality.

- Wind, rain, temperature, humidity, barometric pressure and much more
- Unique Weather Center function provides historical data for each weather variable
- Solar-powered external sensors
- 1,000 ft. (300 m) wireless transmission is up to 3x farther than the competition
- 2.5 second updates are up to 10x faster than competing stations

$395

SM0912

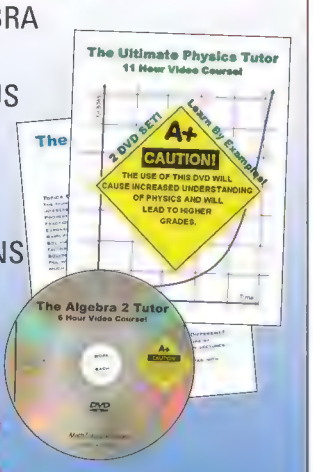
www.vantagevue.com • 1-800-678-3669 DAVIS Davis Instruments

MATHTUTORDVD.COM
Press Play For Success

Having Math Problems?
WE CAN HELP!

SUBJECTS:
- BASIC MATH
- BASIC MATH WORD PROBLEMS
- PRE-ALGEBRA
- ALGEBRA 1 & 2
- ALGEBRA WORD PROBLEMS
- ADVANCED ALGEBRA
- GEOMETRY
- TRIG/PRECALCULUS
- CALCULUS 1, 2, 3
- PHYSICS
- MATRIX ALGEBRA
- UNIT CONVERSIONS
- PROBABILITY/ STATISTICS

AVERAGE COURSE LENGTH: 8 HOURS
MOST COURSES COST ONLY $26.99


The Ultimate Physics Tutor
11 Hour Video Course!
2 DVD SET!
A+
CAUTION!
THE USE OF THIS DVD WILL CAUSE INCREASED UNDERSTANDING OF PHYSICS AND WILL LEAD TO HIGHER GRADES.
The Algebra 2 Tutor
6 Hour Video Course!

VISIT OUR WEBSITE TO VIEW SAMPLE VIDEO CLIPS OF EVERY COURSE

#1 Rated Math & Physics Tutorial DVDs

All topics taught entirely through worked example problems.

Raise grades or your money back
877-MATH-DVD

Visit: MathTutorDVD.com

Duck Confit takes two and a half hours.
Your feet will never know it.

Limited-Time FREE PLACEMAT OFFER (A $50* Value, Yours Free)

ORDER NOW AND GET THIS LIMITED-TIME OFFER
$50* VALUE
YOURS FREE FOUR REVERSIBLE PLACEMATS
per order. Enter code: SMD9LS
EGG DROP GUARANTEE
SO SHOCK-ABSORBING, EGGS DON'T BREAK WHEN DROPPED FROM A 3FT. COUNTER.
SOFT GEL CORE
STAND IN COMFORT

Call or go online today!
1-866-GEL MATS (435-6287)
www.gelpro.com

*4 free reversible Truffle/Black Basketweave placemats per order.

GelPro®
Gel-Filled Anti-Fatigue Floor Mats

ATHENA PHEROMONES™

Created by Dr. Winnifred Cutler, co-discoverer of human pheromones in 1986

INCREASE AFFECTION

Unscented Formulas for Men and Women.
Vial of 1/6 oz. added to 2-4 oz. of your favorite fragrance, worn daily lasts 4 to 6 months.
Will work for most, but not all. 10:13 for women $98.50, 10X for men $99.50.

♥ Sybil (TX) "I began using your 10:13 six months ago and am currently juggling three attractive men, and I haven't had this kind of attention in decades!"

♥ Gene (TX) "Both my wife and I use your products and feel we are starting a new relationship with each other."

Not in stores 610-827-2200
www.athenainstitute.com SMS

www.motionmodels.com
THE WORLDS FINEST READYMADE AND CUSTOM TRUE MUSEUM QUALITY AIRPLANE AND NAVY AND COAST GUARD SHIP MODELS

USS GEORGE H.W. BUSH CVN-77 CUSTOM MADE FOR NORTHROP GRUMMAN AND PRESIDENT BUSH

MOST NAVY AND COAST GUARD SHIPS AVAILABLE

www.motionmodels.com
1-800-866-3172

GIFT GUIDE

SHAPESHIFTER™
The Incredible Brain Challenge
Arrange these 4 hardwood shapes to form 14 different configurations
$14.99 includes S&H continental US
★ Fancy and exotic woods available ★
★ Wholesale pricing for volume purchases ★
www.flwoodworking.com
970-834-1635 • flwoodworking@aol.com

North Country Wind Bells®
Proudly a Green Company!
"Haunting Sounds & Magic Memories®" echo the sounds of bell buoys and sea through this new wind bell, the "Sea Melody™" $36.00
Special Flat rate shipping $4.95
www.northcountrywindbells.com
(877)-930-5435 toll free est

glenn designs
ONE-OF-A-KIND
Wearable Art
www.glenn-designs.com

World Discovery Box
Includes collection of fossils, minerals, sea life and insects. Give a lasting gift of discovery to your kids and grandkids.
Toll Free 877-300-1286
www.worlddiscoverybox.com

Sadigh Gallery
303 Fifth Ave # 1603
New York NY 10016
www.sadighgallery.com
Authentic Ancient Artifacts and Coins at Wholesale Prices

TO RECEIVE A FREE CATALOG
CALL 800.426.2007

The DISAPPEARING DINOSAUR mug
A hot cup of coffee will turn these prehistoric beasts into museum fossils!
PRESENTS OF MIND
$12.95 +S&H
THE UNEMPLOYED PHILOSOPHERS GUILD
For more unusual gifts, request a catalog. Call 800.255.8371 or visit:
www.philosophersguild.com

Spoil her with a Pajama Gram® this Christmas
Shown: Ruby Velour Lounge Set
Choose from hundreds of great PJs and lingerie. Every PajamaGram comes with lavender bath confetti, gift card, and do not disturb sign, delivered in a beautiful hatbox. ALL FREE!
Send a gift you'll both love!
1.800.GIVE PJs

span 12 separate sheets, printed from carefully carved wood blocks; when pasted together, the sheets would measure a stunning 4 1/2 by 8 feet—creating one of the largest printed maps, if not *the* largest, ever produced to that time. In April of 1507, they began printing the map, and would later report turning out 1,000 copies.

Much of what the map showed would have come as no surprise to Europeans familiar with geography. Its depiction of Europe and North Africa derived directly from Ptolemy; sub-Saharan Africa derived from recent Portuguese nautical charts; and Asia derived from the works of Ptolemy and Marco Polo. But on the left side of the map was something altogether new. Rising out of the formerly uncharted waters of the Atlantic, stretching almost from the map's top to its bottom, was a strange new landmass, long and thin and mostly blank—and there, written across what is known today as Brazil, was a strange new name: America.

LIBRARIES TODAY LIST Martin Waldseemüller as the author of the *Introduction to Cosmography*, but the book does not actually single him out as such. It includes opening dedications by both him and Ringmann, but these refer to the map, not the text—and Ringmann's dedication comes first. In fact, Ringmann's fingerprints are all over the work. The book's author, for instance, demonstrates a familiarity with ancient Greek—a language that Ringmann knew well but Waldseemüller did not. The author embellishes his writing with snatches of verse by Virgil, Ovid and other classical writers—a literary tic that characterizes all of Ringmann's writing. And the one contemporary writer mentioned in the book was a friend of Ringmann's.

Ringmann the writer, Waldseemüller the mapmaker: the two men would team up in precisely this way in 1511, when Waldseemüller printed a grand map of Europe. Accompanying the map was a booklet titled *Description of Europe*, and in dedicating his map to Duke Antoine of Lorraine, Waldseemüller made clear who had written the book. "I humbly beg of you to accept with benevolence my work," he wrote, "with an explanatory summary prepared by Ringmann." He might just as well have been referring to the *Introduction to Cosmography*.

Why dwell on this arcane question of authorship? Because whoever wrote the *Introduction to Cosmography* was almost certainly the person who coined the name "America"—and here, too, the balance tilts in Ringmann's favor. The famous naming-of-America paragraph sounds a *lot* like Ringmann. He's known, for example, to have spent time mulling over the use of feminine names for concepts and places. "Why are all the virtues, the intellectual qualities and the sciences always symbolized as if they belonged to the feminine sex?" he would write in a 1511 essay. "Where does this custom spring from: a usage common not only to the

pagan writers but also to the scholars of the church? It originated from the belief that knowledge is destined to be fertile of good works. . . . Even the three parts of the old world received the name of women."

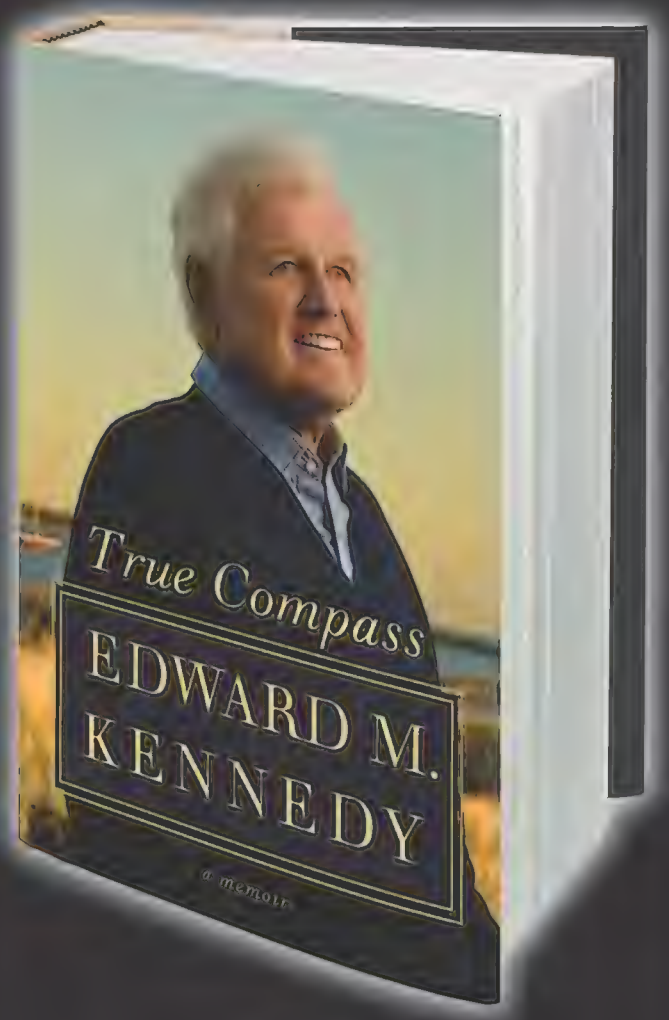
Ringmann reveals his hand in other ways. In both poetry and prose he regularly amused himself by making up words, by punning in different languages and by investing his writing with hidden meanings. The naming-of-America passage is rich in just this sort of wordplay, much of which requires a familiarity with Greek. The key to the whole passage, almost always overlooked, is the curious name Amerigen (which Ringmann quickly Latinizes and then feminizes to come up with America). To get Amerigen, Ringmann combined the name Amerigo with the Greek word *gen*, the accusative form of a word meaning "earth," and by doing so coined a name that means—as he himself explains—"land of Amerigo."

But the word yields other meanings. *Gen* can also mean "born" in Greek, and the word *ameros* can mean "new," making it possible to read Amerigen as not only "land of Amerigo" but also "born new"—a double-entendre that would have delighted Ringmann, and one that very nicely complements the idea of fertility that he associated with female names. The name may also contain a play on *meros*, a Greek word sometimes translated as "place." Here Amerigen becomes A-merigen, or "No-place-land"—not a bad way to describe a previously unnamed continent whose geography is still uncertain.

COPIES OF THE WALDSEEMÜLLER MAP began to appear at German universities in the decade after 1507; sketches of it and copies made by students and professors in Cologne, Tübingen, Leipzig and Vienna survive. The map clearly was getting around, as was the *Introduction to Cosmography* itself. The little book was reprinted several times and attracted acclaim across Europe, largely because of the long Vespucci letter.

What about Vespucci himself? Did he ever come across the map or the *Introduction to Cosmography*? Did he ever learn that the New World had been named in his honor? The odds are that he did not. Neither the book nor the name is known to have made it to the Iberian Peninsula before he died, in Seville, in 1512. But both surfaced there soon afterward: the name America first appeared in Spain in a book printed in 1520, and Christopher Columbus' son Ferdinand, who lived in Spain, acquired a copy of the *Introduction to Cosmography* sometime before 1539. The Spanish didn't like the name, however. Believing that Vespucci had somehow named the New World after himself, usurping Columbus' rightful glory, they refused to put the name America on official maps and documents for two more centuries. But their cause was lost from the start. The name America, such a natural poetic counterpart to Asia, Africa and Europa, had filled a vacuum, and there was no going back, especially not after the young Gerardus Mercator, destined to become the century's most influential cartographer, decided that the whole of the New World, not just its south-

AN EXTRAORDINARY LIFE—AS ONLY HE COULD TELL IT.



"TOUCHINGLY CANDID, big-hearted and altogether superb.... TRUE COMPASS reminds us— we're all the poorer for his absence."
—*Los Angeles Times*

"DEEPLY AFFECTING... HEARTFELT."
—Michiko Kakutani, *New York Times*

A limited printing of 1,000 signed, leather-bound collector's editions are now available. To order your copy while supplies last, visit www.twelvebooks.com.

Available in hardcover, as an audiobook, and in a Large Print Edition

Hachette Book Group
Twelve is an imprint of Grand Central Publishing

Is your wine gasping for air?

New Rabbit® Aerating Pourer comes to the rescue!

Red wine has to "breathe" to realize its full potential in flavor and bouquet. Now you can give wine a breath of fresh aeration without a decanter – with the Rabbit Aerating Pourer.

Simply insert it into a wine bottle as you would an ordinary pourer. When you pour the wine, you see and hear aeration happening. When you sip it, you recognize at once the enhanced taste and aroma of a perfectly aerated red wine.

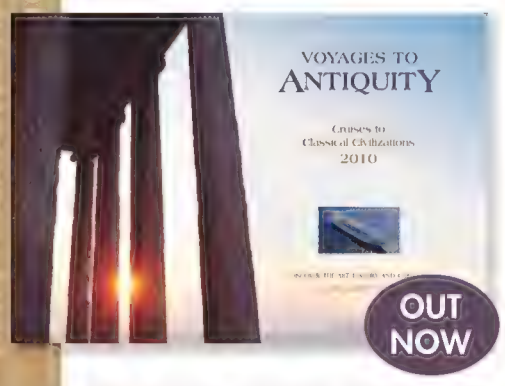
AT:
Bed Bath & Beyond, Bon Ton, Macy's, Total Wine & More, BevMo! Steinmart, Amazon.com, KitchenKapers.com, CentralChef.com

metrokane
metrokane.com

5,000 YEARS OF HISTORY

TWO WEEKS YOU'LL NEVER FORGET

From the wonders of Pharaonic Egypt and the classical elegance of ancient Greek architecture to the monumental splendor of the Byzantine Empire, our aim is to bring to life the exciting and inspiring history of the Mediterranean.



INAUGURAL SEASON BROCHURE

Sixteen extraordinary voyages aboard the *Aegean Odyssey* with shore excursions, gratuities and wine with dinner included in our Inaugural Season fares.
Plus FREE to $199 air!

Call **1-877-398-1460**
Visit **www.voyagestoantiquity.com**
Or **contact your travel professional**

VOYAGES TO ANTIQUITY
CRUISES TO CLASSICAL CIVILIZATIONS

Independence is right around the corner...

Call Now For Your FREE Information Kit

Call your local **Premier Care In Bathing** office today if you or a loved one is struggling getting in or out of a bath. Our knowledgeable staff live in your community, and will come right to your home to offer expert advice on the best **PREMIER WALK IN BATH** that is right for you.

There is no obligation, and the visit is free of charge... so call today and let **Premier** transform your bathroom and transform your life.

$1,000 in Savings Available Today!

Call us today toll free at
1•800•578•2899
SOURCE CODE 38129

Premier™
Care in Bathing

Premier Guarantee

"Transform your bathroom and transform your life."
~ Karen Grassle

ern part, should be so labeled. The two names he put on his 1538 world map are the ones we've used ever since: North America and South America.

RINGMANN DIDN'T HAVE long to live after finishing the *Introduction to Cosmography*. By 1509 he was suffering from chest pains and exhaustion, probably from tuberculosis, and by the fall of 1511, not yet 30, he was dead. After Ringmann's death Waldseemüller continued to make maps, including at least three that depicted the New World, but never again did he depict it as surrounded by water, or call it America—more evidence that these ideas were Ringmann's. On one of his later maps, the Carta Marina of 1516—which identifies South America only as "Terra Nova"—Waldseemüller even issued a cryptic apology that seems to refer to his great 1507 map: "We will seem to you, reader, previously to have diligently presented and shown a representation of the world that was filled with error, wonder, and confusion. . . . As we have lately come to understand, our previous representation pleased very few people. Therefore, since true seekers of knowledge rarely color their words in confusing rhetoric, and do not embellish facts with charm but instead with a venerable abundance of simplicity, we must say that we cover our heads with a humble hood."

Waldseemüller produced no other maps after the Carta Marina, and some four years later, on March 16, 1520, in his mid-40s, he died—"dead without a will," a clerk would later write when recording the sale of his house in St. Dié.

During the decades that followed, copies of the 1507 map wore out or were discarded in favor of more up-to-date and better-printed maps, and by 1570 the map had all but vanished. One copy did survive, however. Sometime between 1515 and 1517, the Nuremberg mathematician and geographer Johannes Schöner acquired a copy and bound it into a beechwood-covered folio that he kept in his reference library. Between 1515 and 1520, Schöner studied the map carefully, but by the

ADVERTISEMENT

Extremely Limited Availability

1 carat marquise-cut DiamondAura® bail
3/8 ctw round DiamondAura® accents
5 carat pear-cut DiamondAura® center
Set in .925 sterling silver

*Special Offer**

Receive $200 in Stauer Gift Coupons with the purchase of this necklace. *Yes, you read that right.*

Better Than FREE?

Stauer gives back! Get our 6-carat French Pear Pendant for $195 and get $200 in gift coupons!

Better than free? Believe it. Stauer is returning some of its success to our many clients with the lavish, limited edition 6-carat ***French Pear Drop Pendant*** **along with a special gift.**

Despite tough economic times, Stauer has had a very good year. Now it's time to give back. That's why when you purchase the DiamondAura® ***French Pear Drop Pendant*** Necklace for $195, you'll receive two $100 Stauer gift coupons. That's **$200** you can use on any of our hundreds of pieces of fine jewelry, vintage watches and luxury goods. Basically, we're paying you to shop Stauer.

Breaking the big-carat barrier. DiamondAura® has proven to be a magnificent lab creation since we first released it five years ago but, up until now we couldn't make a DiamondAura® pendant larger than 2 ¾ carats. Today we release the ultra-luxury, majestic lab-created DiamondAura pendant with stunning clarity, cut and color rarely seen. Our Pendant features a 5 carat, pear-cut DiamondAura that dangles from an 18" chain of the finest .925 sterling silver. The pear is topped with an impressive 1 carat marquise-cut DiamondAura bail.

The Four Cs. Our exclusive DiamondAura jewelry has splendid specifications: color, clarity, cut, and carat weight. We won't bore you with the details, but we've invested close to $6 million in developing DiamondAura. The complex laboratory process involves rare minerals heated to an incredibly high temperature of nearly 5,000° F inside some very modern and expensive equipment. Using chemistry, we found a better way to match the fire and brilliance of a "D" flawless diamond at a much more reasonable cost.

Compare For Yourself at 6 carats		
	Mined Flawless Diamond	DiamondAura Contains Its:
Hardness	Cuts Glass	Cuts Glass
Color	"D" Colorless	"D" Colorless
Clarity	"IF"	Clear
Dispersion/Fire	0.044	0.066
6 ctw necklace	$200,000+	$195

Here's the plain truth: Times are tough, people are strapped and the bottom has dropped out of our economy. It doesn't matter if you're from Wall Street, Main Street or Rodeo Drive, everything has changed. If you have a house, a 401K or a bank account... you've taken a financial hit. But you still need to surprise her with something that will truly take her breath away.

Sound to good to be true? Let me explain: at Stauer we don't make money selling one piece of jewelry to you, we stay in business by serving long term clients. Our data tells us that when you become a Stauer client, you'll be back.

Even a Recession has a silver lining. If you are not thrilled with the DiamondAura ***French Pear Drop Pendant***, return it within 30 days for a refund of your purchase price. Our DiamondAura will last forever, but our **limited edition** will not. Call today to take advantage of this offer.

JEWELRY SPECS:

- 5 carat pear-cut center DiamondAura®
- 1 carat marquise-cut DiamondAura® bail
- Set in precious .925 sterling silver
- 18" princess-length chain of.925 tarnish-free sterling silver

French Pear Drop Pendant Necklace (6 ctw) *only* **$195**

*Special Offer**—Receive $200 in Stauer Gift Coupons with the purchase of the *French Pear Drop Pendant*

******Due to expected demand, this is a very limited time offer. Call today!******

Call now to take advantage of this limited offer.

1-800-721-0386

Promotional Code PDN213-03
Please mention this code when you call.

Stauer
14101 Southcross Drive W.,
Dept. PDN213-03
Burnsville, Minnesota 55337
www.stauer.com

Smart Luxuries—Surprising Prices

Diva-licious

This CD is the first in a brand new series from National Public Radio, and includes more than an hour of seductive webs of song spun by:

Diana Krall · Melody Gardot
Lizz Wright · Tierney Sutton
Jane Monheit · Patricia Barber
Karrin Allyson · Eliane Elias
René Marie · Catherine Russell
Esperanza Spalding · Ledisi
Madeleine Peyroux

Daedalus Books & Music

The Best Browse in Bargain Books, CDs, and DVDs

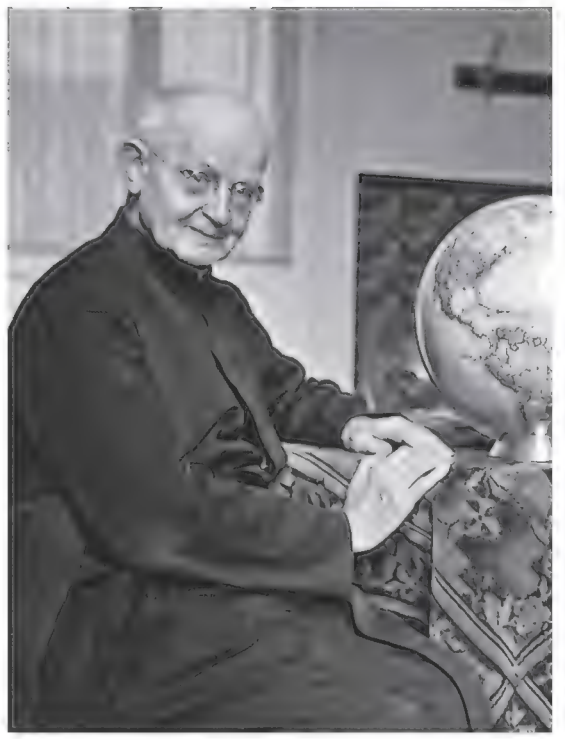
Available at
shop.npr.org
or at salebooks.com
1-800-395-2665

SHOUT! FACTORY

Raven and the Box of Daylight
Raven took the sun from the Box of Daylight and put it in the sky to give us light.
Sterling silver, earrings available.
From our Northwest Coast collection
#N967 Pendant with 24" chain.....$84
$8 handling. Satisfaction guaranteed.
David Morgan
800-324-4934 davidmorgan.com

GO WHERE THE BIG SHIPS CANNOT

COLLECTOR SEEKS
OLD ARTIFACTS
MASKS · CARVINGS · SHIELDS · WEAPONS · CLOTHING
Old North American Indian, Northwest Coast, Eskimo, Plains & Woodlands Indians, South Pacific, New Guinea Polynesian, African and Indonesian, Borneo, Sumatra artifacts including South American and ancient Egyptian. Also Eskimo soapstone carvings.
COLLECTIONS PURCHASED. PRIVACY ASSURED
OFFERING FREE IDENTIFICATION
416.596.1396 | goldenc@inforamp.net



Father Joseph Fischer (in 1937) found the Waldseemüller map by pure chance.

time he died, in 1545, he probably had not opened it in years. The map had begun its long sleep, which would last more than 350 years.

IT WAS FOUND AGAIN by accident, as happens so often with lost treasures. In the summer of 1901, freed from his teaching duties at Stella Matutina, a Jesuit boarding school in Feldkirch, Austria, Father Joseph Fischer set out for Germany. Balding, bespectacled and 44 years old, Fischer was a professor of history and geography. For seven years he had been haunting the public and private libraries of Europe in his spare time, hoping to find maps that showed evidence of the early Atlantic voyages of the Norsemen. This current trip was no exception. Earlier in the year, Fischer had received word that the impressive collection of maps and books at Wolfegg Castle, in southern Germany, included a rare 15th-century map that depicted Greenland in an unusual way. He had to travel only some 50 miles to reach Wolfegg, a tiny town in the rolling countryside just north of Austria and Switzerland, not far from Lake Constance. He reached the town on July 15, and upon his arrival at the castle, he would later recall, he was offered "a most friendly welcome and all the assistance that could be desired."

The map of Greenland turned out to

AUSTRIAN NATIONAL LIBRARY PHOTO ARCHIVE

ADVERTISEMENT

America's First Silver Dollar

Own the Dollar that helped Win America's Independence!

Most Americans would expect to see an authentic Revolutionary War treasure from the 1700's only behind glass in a museum. Now, thanks to a recent discovery of these coins in a centuries old shipwreck, you can actually own America's First Silver Dollar!

Gleaming Silver with a Story to Tell

Struck in the New World between 1772 and 1821 in 90.3% fine silver, these Spanish colonial "8 Royals" were authorized by the Continental Congress upon the recommendation of Thomas Jefferson as America's first official coinage. Widely circulated throughout the 13 Colonies, they were used to help fund the American Revolutionary War and earned the title of "America's First Silver Dollar."

Larger Than a U.S. Silver Dollar

Accepted as legal tender in the U.S. until 1857, each of these hefty silver dollars weighs 27 grams and is 39 mm in diameter. From Europe to China, throughout the Caribbean, and across the 13 Colonies, these silver dollars were readily accepted for trade due to their heft and high silver value.

Imagine Who Held These Coins

Each of these amazing silver dollars makes history come alive. Coins like these were spent in taverns by patriots celebrating America's victory over the British in 1783. Was this the coin George Washington tossed across the Potomac River or used to purchase badly needed supplies for his army?

Offered Elsewhere for as Much as $295!

America's First Silver Dollars have sold nationally for $100 to $295 each. Now, thanks to this exclusive shipwreck treasure discovery, we are able to offer these historic coins for just $49 (plus s&h)—our best price ever! Or save even more by reserving 5 or more for friends and loved ones for just $44.00 each.

Your *America's First Silver Dollar* was minted in 1821 or earlier and will come to you mounted in a handsome full color display case. The display panel describes the fascinating story of this classic American Silver Dollar. A signed Certificate of Authenticity accompanies each coin.

Order Risk-Free. **Your satisfaction is assured with our full 30-day money back guarantee. Hundreds of thousands have ordered from us with confidence since 1984.**

Call Now Toll-Free 24 Hours a Day

1-888-277-8341

Offer Code FSD146-02. Please provide this code when you call.

ALL Major Credit Cards Accepted

We can also accept your check by phone. To order by mail call for details.

GovMint.com

YOUR ONE BEST SOURCE FOR COINS WORLDWIDE

Note: GovMint.com is a private distributor of government and private coin and medallic issues and is not affiliated with the United States Government. Prices and availability subject to change without notice. ©GovMint.com, 2009

BBB ACCREDITED BUSINESS

Caravan Americas

Call 1-800-CARAVAN
for your own
free brochure.

All Tours Priced from $995
$995 to $1195 pp, dbl ocpy + taxes and fees.
USA and Canadian tours include hotels,
activities, guides & most meals.
* Latin America tours include all meals.

9 days	Canadian Rockies
8 days	Nova Scotia
8 days	Grand Canyon
8 days	Yellowstone, Mt. Rushmore
8 days	California
8 days	Fall Foliage
9 days	*Mexico Ancient Cultures
9 days	*Copper Canyon Train
10 days	*Costa Rica
11 days	*Guatemala
9 days	*Panama Cruise and Tour

Caravan.com
THE BEST VALUE IN TRAVEL
SINCE 1952 CALL 1•800•CARAVAN

"Caravan is ... very reasonably priced"
— *New York Times*

JOHN CHRISTIAN
DESIGNERS & CRAFTSMEN

YOUR ANNIVERSARY DATE
IN ROMAN NUMERALS!
December 11, 1998 is XII XI MCMXCVIII
$650 & $4,400

ORDER BY DEC. 22 FOR HOLIDAY DELIVERY!
YOUR CHILDREN'S
NAMES & BIRTHSTONES
(UP TO 5 NAMES) $590 & $225
MONEY-BACK GUARANTEE AND FREE RESIZE.
VIEW OUR COLLECTION ONLINE! FREE CATALOGUE
RINGBOX.COM 1.888.646.6466

MEN'S WIDE SHOES
EEE-EEEEEE
SIZES 5-20
FREE catalog
High quality
200 styles

HITCHCOCK SHOES, INC.
Dept. 21S3 Hingham, MA 02043
1-800-992-WIDE www.wideshoes.com

European Beret $14
100% Wool • One Size Fits All
Black, Navy, Brown, Red, Camel, Grey
Check or Credit Card w/Exp. Date.
Add $2 shipping plus $1 each additional
www.johnhelmer.com
John Helmer • Est. 1921 • (503) 223-4976
969 S.W. Broadway, Dept. S129 • Portland, OR 97205

UNIVERSITY OF NOTRE DAME
THREE FAITHS ONE LAND:
EXPLORING THE HOLY LAND
April 26-May 4, 2010 • Jerusalem
Explore the Holy Land in a unique program
designed for learning, discovery, and enrichment
Visit http://Tantur2010.nd.edu or call 800-631-3622.
A Notre Dame Mendoza College of Business Travel/Learn Program

The Addiction you MUST have!
a fitting challenge
Stave
handcrafted wooden jigsaw
PUZZLES
www.StavePuzzles.com 802-295-5200

be everything Fischer had hoped. As was his custom on research trips, after studying the map Fischer began a systematic search of the castle's entire collection. For two days he made his way through the inventory of maps and prints and spent hours immersed in the castle's rare books. And then, on July 17, his third day there, he walked over to the castle's south tower, where he had been told he would find a small second-floor garret containing what little he hadn't yet seen of the castle's collection.

The garret is a simple room. It's designed for storage, not show. Bookshelves line three of its walls from floor to ceiling, and two windows let in a cheery amount of sunlight. Wandering about the room and peering at the spines of the books on the shelves, Fischer soon came across a large folio with beechwood covers, bound together with finely tooled pigskin. Two Gothic brass clasps held the folio shut, and Fischer gently pried them open. On the inside cover he found a small bookplate, bearing the date 1515 and the name of the folio's original owner: Johannes Schöner. "Posterity," the inscription began, "Schöner gives this to you as an offering."

Fischer started leafing through the folio. To his amazement, he discovered that it contained not only a rare 1515 star chart engraved by the German artist Albrecht Dürer, but also two giant world maps. Fischer had never seen anything quite like them. In pristine condition, printed from intricately carved wood blocks, each one was made up of separate sheets that, if removed from the folio and assembled, would create maps approximately 4 1/2 by 8 feet in size.

Fischer began examining the first map in the folio. Its title, running in block letters across the bottom of the map, read, THE WHOLE WORLD ACCORDING TO THE TRADITION OF PTOLEMY AND THE VOYAGES OF AMERIGO VESPUCCI AND OTHERS. This language brought to mind the *Introduction to Cosmography*, a work Fischer knew well, as did the portraits of Ptolemy and Vespucci that he saw at the top of the map.

Could this be . . . *the* map? Fischer began to study it sheet by sheet. Its two

Advertisement

How's This For a Stimulus Package?

FREE Ruby Pendant for the First 2500 Responders

Our gift to you: A one carat radiant, lab-created ruby pendant

Here's some important news that will affect your bank account. But it's good news, for a change. You see, while Congress was busy cutting billion dollar checks to the banks and big corporations, we concocted our own bailout plan. And ours won't cost the taxpayer a dime and looks a million times better with a cocktail dress.

In tough economic times, it's just not good enough to offer meager discounts of 10% and 20%. Even "half-off" has become ho-hum. That's why we're going all the way. Our stunning *Scienza*™ lab-created ***Ruby Pendant*** can be yours for **FREE** (You pay nothing except basic shipping and processing costs). Similar designs can be found at the largest jewelry stores in America for $299. But for a limited time, **you can take 100% off!**

This is no joke. There is no catch. Simply call our toll-free number or log on to **www.stauer.com**. The first 2500 to respond to this ad will get the *Scienza*™ lab-created ***Ruby Pendant*** absolutely FREE. If you're wondering exactly how we can afford to do this... read on.

Why give away jewelry? Our real goal is to build a long term relationship with you. We are convinced you will become a loyal Stauer client in the years to come. But for now, in this lousy economy, offering this remarkable pendant seemed the best way for you to give us a try.

The *Scienza*™ ***Ruby Pendant*** features an impressive 1-carat oval-cut, lab-created ruby prong-set in luxurious gold vermeil. Surrounding the radiant red oval are 14 brilliant-cut, lab-created Diamond*Aura*® dazzlers. The combination sparkles with a passionate fire that is even brighter than most mined stones.

The world's most valuable gemstone. For thousands of years, the luxury of natural rubies has been coveted by pharaohs, emperors and royalty from all continents. Known as the "king of all precious stones," the red glow of a ruby symbolizes love, life and desire. But such beauty can come at a steep price and even today, rubies remain some of the most expensive gems on Earth.

Can science really improve nature? The right chemistry is vital in any romantic relationship. We had to get it perfect. That's why the gemologists worked for years to create the world's most romantic, most colorful lab-created ruby. Our *Scienza*™ are scientifically grown, crafted in laboratories with precise equipment that recreates the high pressures and heat that nature uses to produce gemstones far beneath the surface of the earth. *Scienza*™ are chemically identical to the natural gemstone in hardness and display a better color and sparkle than most mined corundum.

But mined rubies can cost up to $5,000 per carat for this level of color and clarity! The *Scienza*™ originates from an ingenious process that lets you experience the seductive fire of priceless gems without the exorbitant cost. You pay nothing except basic shipping and processing costs of $25.95, the normal shipping fee for a $200–$300 pendant

It's okay to be skeptical. But the truth is that Stauer doesn't make money by selling one piece of jewelry to you on a single occasion. Our success comes from serving our long term clients. Be one of the first 2500 to respond to this ad and receive 100% off while getting a closer look at Stauer's exclusive selection of fine jewelry.

JEWELRY SPECS:

- 1 carat 5mm x 7mm lab-created, oval-faceted ruby
- 1/5 ctw white Diamond*Aura* - Gold vermeil setting

Scienza™ Lab-created Ruby Pendant (1 1/5 ctw) ***Your Cost*—FREE — pay shipping & processing only.**

Call now to take advantage of this extremely limited offer.

1-888-277-8379

Promotional Code SRP190-01
Please mention this code when you call.

Stauer
14101 Southcross Drive W.,
Dept. SRP190-01
Burnsville, Minnesota 55337
www.stauer.com

Smart Luxuries—Surprising Prices

Save an Additional
20% off Down Robes
Bed Jacket & Slippers
LIMITED TIME OFFER!
Cotton fabric, Shawl collar and roll back cuffs. Cream, peach, bluette, white, navy, burgundy or teal. Sizes XS, S, M, L, XL. Reg. $180, Sale $99.95, + 20% off = $79.96. S&H $8.95. Matching Down Slippers in sizes XS, S, M, L. Reg $42, Sale $24.95 + 20% off = $19.96. S&H $4.95. CA residents add 9.5% tax.
FREE SHIPPING & HANDLING
when you purchase both Down Robe or Bed Jacket & Slippers.
Down Bed Jacket.
Same colors as Down Robe, sizes XS, S, M, L, XL. Reg. $120, Sale $59.95, + 20% off = $47.96. S&H, $8.95.
WARM THINGS
180 Paul Dr., Dept. SO
San Rafael, CA 94903
415-472-2154
Ships within 48 hrs.
Order by Phone, Website or Mail
MC, Visa or Check.
www.warmthingsonline.com

www.dallaspridgenjewelry.com
DALLAS PRIDGEN JEWELRY
One At A Time, By Hand
1 inch
Juliet's Heart
Sterling Silver $98
14k Gold $599
Unconditionally Guaranteed
1-800-477-1856

STEAM MODELS!
Over 150 Working Steam Toys, Stirling Hot Air Engines and Intriguing Collectible Tin Toys
Kits or Assembled From $93.48
43 PAGE COLORED CATALOG $6.95 REFUNDABLE WITH ORDER
YESTERYEAR TOYS & BOOKS INC.
BOX 537 • DEPT. SM9 • ALEXANDRIA BAY, NY 13607
1-800-481-1353 • www.yesteryeartoys.com

AFRICA • CHINA • INDIA • JAPAN • NEPAL • SRI LANKA • TAIWAN
Since 1989
UPTON TEA IMPORTS
Purveyor of the World's Finest Teas
1-800-234-8327
www.uptontea.com
Free catalog listing over 320 varieties of garden-fresh, loose tea
34 A Hayden Rowe St.*Hopkinton, MA 01748

COLLECTOR SEEKS
OLD CHINESE & JAPANESE ANTIQUES
Porcelain, bronze, silver, jade, lacquer and cloisonné. Discretion Assured.
COMPLETE COLLECTIONS PURCHASED
416.596.1396 | goldenc@inforamp.net

"Honey, I Shrunk the Tipi"
FULL-SIZE TIPIS AVAILABLE
Child's 7 ft. Montana Tipi
• Heavy 12 oz. canvas
• Easy Set up Indoor or Out
$249
Complete with Poles, Door & Carry Bag
Shipping $26.00
VISA & MC Accepted
Ships the day of order
ALPINE TIPIS
306 Main St. Polson, MT 59860 • 1-800-224-5286

AUTHORS WANTED
Leading subsidy book publisher seeks manuscripts. Fiction, non-fiction, poetry, juvenile, religious, etc. New authors welcomed. For free 32-page illustrated guide-book TD-72 call 1-800-821-3990 or write to Vantage Press, 419 Park Ave S., New York, NY 10016

China, Crystal, Silver & Collectibles
Old & New • Buy & Sell
13 Million Pieces
297,000 Patterns
Call for FREE lists of each of your patterns.
1-800-REPLACE
(1-800-737-5223)
PO Box 26029, Dept. SM
Greensboro, NC 27420
www.replacements.com®
REPLACEMENTS, LTD.®

Arabella
Caribbean and New England Cruises
20 luxurious private cabins
atlanticstars.com
800.395.1343

SMITHSONIAN; December 2009; Volume 40, Number 9 SMITHSONIAN (ISSN 0037-7333) is published monthly by Smithsonian Enterprises, 600 Maryland Ave. S.W., Suite 6001, Washington, D.C. 20024. Periodical postage paid at Washington, D.C. and additional mailing offices. POSTMASTER: send address changes to Smithsonian, P.O. Box 420312, Palm Coast, FL 32142-0312. Printed in the USA. Canadian Publication Agreement No. 40043911. Canadian return address: Brokers Worldwide, PO Box 1051, Fort Erie, ON L2A 6C7.

We may occasionally publish extra issues. ©Smithsonian Institution 2009. Al. rights reserved. Reproduction in whole or in part without permission is prohibited. Editorial offices are at MRC 513, P.O. Box 37012, Washington, D.C. 20013 (202-633-6090). Advertising and circulation offices are at 420 Lexington Ave., New York, NY 10170 (212-916-1300). **MEMBERSHIP DUES/ SUBSCRIPTION** Prices: All subscribers to SMITHSONIAN are members of the Smithsonian Institution. United States and possessions: $38 a year payable in U.S. funds. Canada add $13 (U.S. funds) for each year. Foreign add $26 (U.S. funds) for each year. Ninety-nine percent of dues is designated for magazine subscriptions. Current issue price is $4.99 (U.S. funds). Back issue price is $7.00 (U.S. funds). To purchase a back issue, please call or email Eleni Gaveras at 212-916-1379 or watsone@si.edu. **Mailing Lists:** From time to time we make our subscriber list available to companies that sell goods and services we believe would interest our readers. If you would rather not receive this information, please send your current mailing label, or an exact copy, to: Smithsonian, Mail Preference Service, P.O. Box 420311, Palm Coast, FL 32142-0311. **Subscription Service:** should you wish to change your address, or order new subscriptions, you can do so by writing SMITHSONIAN, P.O. Box 420311, Palm Coast, FL 32142-0311, or by calling 1-800-766-2149 (outside of U.S., call 1-386-447-2721).

center sheets, which showed Europe, northern Africa, the Middle East and western Asia, came straight from Ptolemy. Farther to the east, it presented the Far East as described by Marco Polo. Southern Africa reflected the nautical charts of the Portuguese.

It was an unusual mix of styles and sources: precisely the sort of synthesis, Fischer realized, that the *Introduction to Cosmography* had promised. But he began to get truly excited when he turned to the map's three western sheets. There, rising out of the sea and stretching from the top to bottom, was the New World, surrounded by water.

A legend at the bottom of the page corresponded verbatim to a paragraph in the *Introduction to Cosmography*. North America appeared on the top sheet, a runt version of its modern self. Just to the south lay a number of Caribbean islands, among them two big ones identified as Spagnolla and Isabella. A small legend read, "These islands were discovered by Columbus, an admiral of Genoa, at the command of the King of Spain." Moreover, the vast southern landmass stretching from above the Equator to the bottom of the map was labeled DISTANT UNKNOWN LAND. Another legend read THIS WHOLE REGION WAS DISCOVERED BY THE ORDER OF THE KING OF CASTILE. But what must have brought Fischer's heart to his mouth was what he saw on the bottom sheet: AMERICA.

The 1507 map! It had to be. Alone in the little garret in the tower of Wolfegg Castle, Father Fischer realized that he had discovered the most sought-after map of all time.

FISCHER TOOK THE NEWS of his discovery straight to his mentor, the renowned Innsbruck geographer Franz Ritter von Wieser. In the fall of 1901, after intense study, the two went public. The reception was ecstatic. "Geographical students in all parts of the world have awaited with the deepest interest details of this most important discovery," the *Geographical Journal* declared, breaking the news in a February 1902 essay, "but no one was probably prepared for the gi-

ADVERTISEMENT

FREE TRAVEL INFORMATION

For a complete listing, visit:
www.smithreader.com

Special offers and travel deals from around the world

Alaska. Get your FREE official Alaska State Vacation Guide today!
www.TravelAlaska.com/smi

Costa Rica Tourism Board. Experience the wonders of Nature at its best. Call 1-866-COSTA-RICA or go to **www.visitcostarica.com.**

Destination DC. Washington, DC. Create your own power trip at **Washington.org.** Dozens of free attractions and great weekend packages.

The Great State of Texas. Create your perfect vacation with your FREE Texas State Travel Guide. Visit **www.TravelTex.com.**

New Brunswick Tourism and Parks. Walk on the ocean floor...One of the Magnifique Moments waiting for you at **TourismNewBrunswick.ca.**

Newfoundland and Labrador. It's a short trip to the very end of the Earth, where the dawn breaks first at the most easterly edge of the continent. Free Traveler's Guide at 1-800-563-6353 or **NewfoundlandLabrador.com.**

Nova Scotia Tourism. Explore Nova Scotia's vibrant culture and heritage. Visit **Nova Scotia.com** or call 1-800-565-0000 for vacation planning.

Prince Edward Island. For your free Island Guide call 1-800-463-4PEI or visit **www.gentleisland.com.**

Smithsonian Journeys. Love to travel? Love to learn? Take the Smithsonian on your next trip. **www.SmithsonianJourneys.org**

Offer Expires March 3, 2010

U.S. Mint ends Statehood quarter series

Own the complete set – ALL 50 Quarter designs ...*before it's too late!*

Now that the wildly popular Statehood quarters have ended, collectors are hurrying to put sets together featuring all 50 designs from 1999-2008, in mint Uncirculated condition. Don't miss out, order today to get your complete Uncirculated 50-coin set of all 50 Statehood quarter designs issued since 1999 – ***before it's too late*** – for the special low price of ONLY $19.95! You'll **SAVE 76%** off the regular price, and get an Uncirculated 5-coin set of 2004-2006 Westward Journey nickels absolutely **FREE!**

FREE Gift!
when you order by deadline
Uncirculated 5-Coin Set of Westward Journey Nickels minted from 2004-2006 – five *different* nickel designs!

You'll also receive our fully illustrated catalog, plus other fascinating selections from our Free Examination Coins-on-Approval Service, from which you may purchase any or none of the coins – return balance in 15 days – with option to cancel at any time.

45-Day Money Back Guarantee of Satisfaction

Special Offer for New Customers Only

☑ **YES!** Please send me the Complete Uncirculated Set of 1999-2008 Statehood Quarters for ONLY $19.95 – regularly ~~$83.95~~ (limit 5 sets). Also send my **FREE** Westward Journey Nickel Set (one set per customer, please).

Order Deadline: 12:00 Midnight, December 31, 2009

How Many Sets (limit 5): $_____

Total Cost @ $19.95 per set: $_____

Method of payment:
- ❑ Check payable to Littleton Coin Co.
- ❑ VISA
- ❑ MasterCard
- ❑ American Express
- ❑ Discover Network

Add a Custom Statehood Display Folder and **SAVE over 10%** at $3.50 each (limit 5): $_____

SPECIAL SAVINGS!

Shipping & Handling: $ 4.95

Total Amount: $ _____

Card No. _____ Exp. Date ___/___

Name _____
Please print your complete name and address clearly

Address _____

City _____ State _____ Zip _____

E-Mail _____

Please send coupon to:

Littleton Coin Company®
Dept. 9NC407
1309 Mt. Eustis Road
Littleton NH 03561-3737
America's Favorite Coin Source • TRUSTED SINCE 1945

Don't delay – these historic coins WILL NEVER BE MINTED AGAIN!
To order, please mail coupon or visit us at www.LittletonCoin.com/specials

©2009 LCC, LLC

Statement of ownership, management and circulation (required by 39 U.S.C. 3685) of *Smithsonian* published monthly by Smithsonian Media, 420 Lexington Avenue, Suite 2335, New York, N.Y., 10170-1845 for October 1, 2009. General business offices of the publisher are located at 420 Lexington Avenue, Suite 2335, New York, N.Y., 10170-1845. Name and address of publisher is Kerry Bianchi, 420 Lexington Avenue, Suite 2335, New York, N.Y., 10170-1845. Name and address of editor is Carey Winfrey, Capital Gallery, Suite 6001, MRC 513, P.O. Box 37012, Washington, D.C., 20013-7012. Name and address of managing editor is Alison McLean, Capital Gallery, Suite 6001, MRC 513, P.O. Box 37012, Washington, D.C., 20013-7012. Owner is Smithsonian Institution, 1000 Jefferson Drive S.W., Washington, D.C. 20560. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages or other securities: None. The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes have not changed during the preceding 12 months (Section 411.3, DMM). The average number of copies of each issue during the preceding 12 months are: a) Total number of copies printed: **2,099,927**; b) Paid and/or Requested Circulation: (1) Mailed Outside-County Paid Subscriptions stated on PS Form 3541: **2,051,897**; (2) Mailed In-County Paid Subscriptions stated on PS Form 3541: **0**; (3) Paid distribution outside the mails including sales through dealers and carriers, street vendors, counter sales and other paid distribution outside USPS®: **19,446**; (4) Paid distribution by other classes of mail through USPS®: **0**; (c) Total paid distribution: **2,071,342**. d) Free of nominal rate distribution: (1) Free of nominal rate outside-county copies included on PS Form 3541: **5,833**; (2) free or nominal rate in-county copies included on PS Form 3541: **0**; (3) free or nominal rate copies mailed at other classes through the USPS®: **0**; (4) free or nominal rate distribution outside the mail: **6,343**. Total free or nominal rate distribution: **12,176**. Total distribution: **2,083,518**. Copies not distributed: **16,409**. Total: **2,099,927**. Percent paid **99%**. The actual number of copies of single issue published nearest to filing date are: a) Total number of copies printed: **2,102,745**; b) Paid and/or Requested Circulation: (1) Mailed Outside-County Paid Subscriptions stated on PS Form 3541: **2,054,488**; (2)Mailed In-County Paid Subscriptions stated on PS Form 3541: **0**; (3) Paid distribution outside the mails including sales through dealers and carriers, street vendors, counter sales and other paid distribution outside USPS®: **18,848**; (4) Paid distribution by other classes of mail through USPS®: **0**; (c) Total paid distribution: **2,073,336**. d) Free of nominal rate distribution: (1) Free of nominal rate outside-county copies included on PS Form 3541: **5,978**; (2) free or nominal rate in-county copies included on PS Form 3541: **0**; (3) free or nominal rate copies mailed at other classes through the USPS®: **0**; (4) free or nominal rate distribution outside the mail: **7,222**. Total free or nominal rate distribution: **13,200**. Total distribution: **2,086,536**. Copies not distributed: **16,209**. Total: **2,102,745**. Percent paid **99%**. I certify that all information furnished is true and complete.

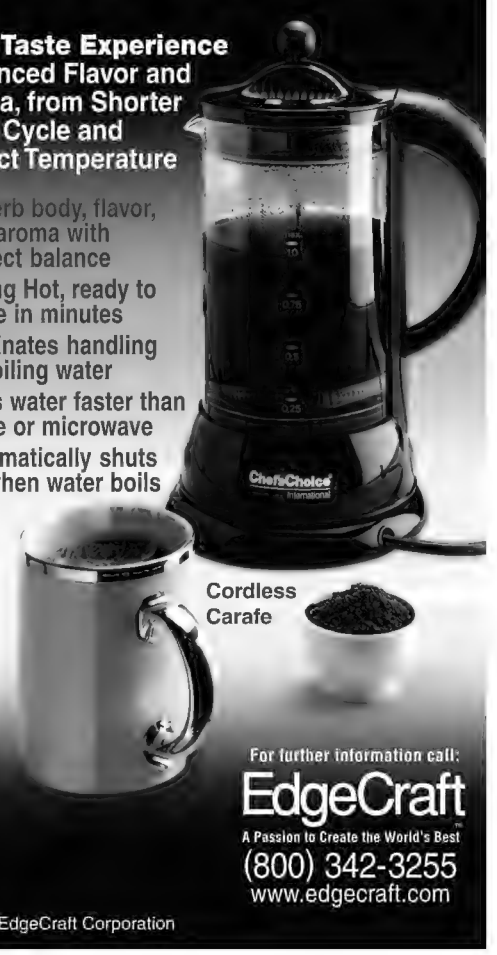
(Signed) Ed Dequina, M.B.A.
Business Manager
Smithsonian Media

Chef'sChoice®
Electric French Press-Plus™

The Perfect Cup of Coffee Piping Hot – Fast & Simple

New Taste Experience
Enhanced Flavor and Aroma, from Shorter Brew Cycle and Perfect Temperature

- Superb body, flavor, and aroma with perfect balance
- Piping Hot, ready to serve in minutes
- Eliminates handling of boiling water
- Boils water faster than stove or microwave
- Automatically shuts off when water boils



For further information call:
EdgeCraft
A Passion to Create the World's Best
(800) 342-3255
www.edgecraft.com

©2000 EdgeCraft Corporation

Provide For Your Future And The Smithsonian's.

That's exactly what Gloria Hamilton is doing by making a Smithsonian charitable gift annuity.

"I had some stocks that were paying very little in dividends, but the capital gains tax on selling them would have been tremendous. I realized that creating a charitable gift annuity with the Smithsonian would work to benefit both of us."

Gloria Hamilton, a special friend who is thinking of the Smithsonian's future.

Advantages of a Smithsonian Gift Annuity include lifetime payments at attractive rates, plus significant tax benefits for your charitable contribution.

Sample Rates
(one beneficiary)

Age 65	5.3%
Age 75	6.3%
Age 85	8.1%
Age 90+	9.5%

Smithsonian Institution
P.O. Box 37012 MRC 035
Washington, D.C. 20013-7012

Smithsonian Legacy Society
(888) 419-7584
e-mail: legacy@si.edu
www.si.edu/plangiv

❑ Send information on a Smithsonian Charitable Gift Annuity

Birthdates(s):_____

Amt: ❑ $10,000 ❑ $100,000 ❑ $50,000 ❑ _____

❑ I want to know more about gifts to the Smithsonian that provide me with income for life

❑ Send information on including the Smithsonian in my will

❑ I have already included the Smithsonian in my will

Name:_____

Address:_____

_____

Phone:_____

Email:_____

Smithsonian Legacy Society
P.O. Box 37012 • MRC 035
Washington, D.C. 20013-7012

PG912SM

gantic cartographical monster which Prof. Fischer has now awakened from so many centuries of peaceful slumber." On March 2 the *New York Times* followed suit: "There has lately been made in Europe one of the most remarkable discoveries in the history of cartography," its report read.

Interest in the map grew. In 1907, the London-based bookseller Henry Newton Stevens Jr., a leading dealer in Americana, secured the rights to put the 1507 map up for sale during its 400th-anniversary year. Stevens offered it as a package with the other large Waldseemüller map—the Carta Marina of 1516, which had also been bound into Schöner's folio—for $300,000, or about $7 million in today's currency. But he found no takers. The 400th anniversary passed, two world wars and the cold war engulfed Europe, and the Waldseemüller map, left alone in its tower garret, went to sleep for another century.

Today, at last, the map is awake again—this time, it would appear, for good. In 2003, after years of negotiation with the owners of Wolfegg Castle and the German government, the Library of Congress acquired it for $10 million. On April 30, 2007, almost exactly 500 years after its making, German Chancellor Angela Merkel officially transferred the map to the United States. That December, the Library of Congress put it on permanent display in its grand Jefferson Building, where it is the centerpiece of an exhibit titled "Exploring the Early Americas."

As you move through it, you pass a variety of priceless cultural artifacts made in the pre-Columbian Americas, and a choice selection of original texts and maps dating from the period of first contact between the New World and the Old. Finally you arrive at an inner sanctum, and there, reunited with the *Introduction to Cosmography*, the Carta Marina and a few other select geographical treasures, is the Waldseemüller map. The room is quiet, the lighting dim. To study the map you have to move close and peer carefully through the glass—and when you do, it begins to tell its stories.

ADVERTISEMENT

"An exquisite 1 carat black diamond for under $200—*unbelievable!*"

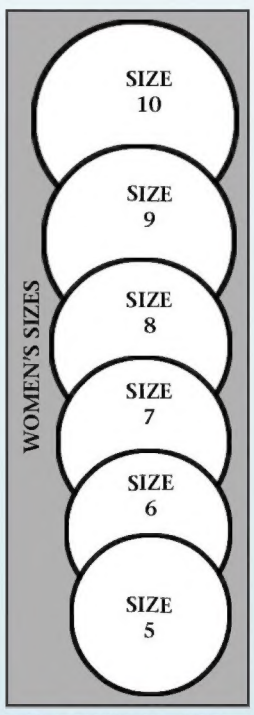
— James T. Fent, *Stauer GIA Graduate Gemologist*

Less than 680 still available. A genuine one carat diamond ring at an incredible price— ***under $200!***

Black is the New Black

Experience some of that old black magic at an unbelievable price: a genuine 1-carat Black Diamond Ring now under $200!

When I strolled into the palatial lobby of the Grand Casino in Monte-Carlo, I headed straight for the roulette table to place my one bet for the evening. Of course, I bet it all on black. Black diamonds that is. I met our Belgian diamond dealer in the casino here and he pulled out a black suede pouch. He had almost 900 carats of rose cut black diamonds with him. When he told me the terrific price, I said that I'll take them all. Faceted one carat diamonds for under $200 a carat—maybe this is one time you can leave a casino with a winning hand.



USING THE RING SIZE CHART

Place one of her rings on top of one of the circle diagrams. Her ring size is the circle that matches the inside diameter of the ring diagram. If her ring falls between sizes, order the next larger size.

Right now, black diamonds are the hottest precious stones in high-end jewelry. You see them everywhere, from the glitz and glamour of the French Riviera to the haute-couture fashion houses of London, Paris and Milan. And thanks to our priceless connections with the Belgium's top gem cutters, Stauer has found a way to make black diamonds even more attractive.

Introducing the Exclusive Stauer Rose Cut. Our ***Black Diamond Ring*** is a true stunner in classic black and white. But what really sets it apart from other black diamond jewelry is the exclusive Stauer Rose Cut. You'll see that we meticulously engineered the geometry to coax the best sparkle from the bold black stone. Every angle and edge catches and bounces back the light, setting the center stone on fire.

The ***Black Diamond Ring*** features a 1-carat, rose-cut genuine black diamond surrounded by 48 brilliant, lab-created white DiamondAura®. The gem-quality black diamond is prong-set in the finest .925 sterling silver and rises up from the concentric circles, like pond ripples that sparkle with dozens of fiery facets. The shoulders are adorned with their own glittering epaulets, radiant rows of DiamondAura® that draw the eye back to the diamond center.

Our buying power saves you thousands. You can find similarly designed black diamond rings that are selling for $2,000, $3,000 and even $4,000 per carat! How is it possible that Stauer can offer our spectacular ***Black Diamond Ring*** for less than $200? It's simple, really. Since we buy literally millions of carats of precious gemstones every year, no one can touch our price.

Try our Black Diamond Ring. And, if for any reason, you find yourself looking like less than a million bucks, just return the ***Black Diamond Ring*** within 30 days for a refund of your purchase price. But, be warned. Once you've had a taste of the "good life", there's no turning back.

JEWELRY SPECS:

- 1 ctw genuine black diamond
- 48 scientifically-grown Diamond*Aura*®
- .925 sterling silver setting - Ring sizes 5–10

A. **Black Diamond Ring** (1 ¾ ctw)
~~$295.00~~ **$195.00**

B. **Black Diamond Earrings** (1 5/8 ctw)
~~$495.00~~ **$295.00**

C. **Black Diamond Pendant** (1 5/8 ctw)
~~$295.00~~ **$195.00**

Black Diamond Set—~~$1,085.00~~ **$645.00**
Save $440

Call now to take advantage of this limited offer.

1-888-201-7659

Promotional Code BDR146-01
Please mention this code when you call.

Stauer
14101 Southcross Drive W.,
Dept. BDR146-01
Burnsville, Minnesota 55337
www.stauer.com

Smart Luxuries—Surprising Prices

START NOW AND SAVE UP TO $300 A YEAR.

Easy to use. Easy to see. Easy on the wallet.

Over the years, cell phones have become smaller and smaller with so many complicated features. They are harder to program and harder to use. But the Jitterbug cell phone has simplified everything, so it's not only easy to use, it's easy to try. No crowded malls, no waiting in line, no confusing sales people, or complicated plans. Affordable and convenient cell phone service is only a toll-free phone call away.

Questions about Jitterbug?

Try our pre-recorded Toll-Free Hotline

1-877-760-8941.

Simplicity for everyone.

- Comfortable keypad designed to make dialing easy
- Large color screen displays numbers with clarity
- Patented design delivers clear sound and reduces background noise
- Bluetooth® and Caller ID enabled
- U.S. Based Customer Service
- Live, 24-hour Jitterbug Operators greet you by name, connect calls and update your Phone Book[1]
- Friendly, 30-Day Return Policy[2]
- No contracts or prepaid hassles

FREE GIFT
Order Now and receive a **FREE Car Charger** with activation, a $24.99 value![4]

Why pay for minutes you'll never use!

Monthly Minutes[3]	50	100	200	New
Monthly Rate	$14.99	$19.99	$29.99	New
Monthly Minute Carry Over	60 Days	60 Days	60 Days	New
Night/Weekend Minutes	—	—	500	New
Operator Assistance	24/7	24/7	24/7	
Long Distance Calls	FREE	FREE	FREE	
Nationwide Coverage	YES	YES	YES	

Other plans available. Ask your Jitterbug expert for details.

100% U.S. Based Customer Service

Jitterbug Cell Phone Item #BU-4722

Please mention promo code 39523

1-877-657-5525

jitterbug.com

jitterbug®

firstSTREET® for Boomers and Beyond®

1998 Ruffin Mill Road
Colonial Heights, VA 23834

Created together with worldwide leader Samsung.

IMPORTANT CONSUMER INFORMATION: Subject to Customer Agreement, select calling plans and credit approval. Other changes and restrictions may apply. Coverage and service not available everywhere. [1]For each Operator service, you'll be charged a 5-minute Operator assistance fee in addition to the minutes used both for the length of the call with the Operator and any call connected by the Operator. [2]Please visit www.jitterbug.com for further information about terms and conditions. [3]All plans require the purchase of a Jitterbug phone and a one-time set-up fee ($35). [4]This GreatCall offer is available with activation. All rights reserved. Copyright ©2009 by FirstSTREET for Boomers and Beyond, Inc. Copyright ©2009 GreatCall, Inc., Jitterbug is a registered trademark of GreatCall, Inc. Samsung is a registered trademark of Samsung Electronics America, Inc. and its related entities. Typical plan information (most popular, not including family share plans) is based on marketing materials from nationally available cellular companies as of June, 2009.

Experience The Metropolitan Museum of Art with a World-renowned Art Historian

and Tour One of the Greatest Art Museums in the World in 24 Descriptive Lectures on DVD from The Teaching Company®.

The Temple of Dendur. Ca. 15 B.C.E. Sandstone, L. from gate to rear of temple 82 ft. (24 m 60 cm). Given to the United States by Egypt in 1965, awarded to The Metropolitan Museum of Art in 1967, and installed in The Sackler Wing in 1978 (68.154). Image copyright © The Metropolitan Museum of Art/Art Resource, NY.

No other museum covers the history of humanity and its achievements as thoroughly as The Metropolitan Museum of Art. In 24 half-hour lectures, illustrated with more than 400 works of art, Professor Richard Brettell introduces you to virtually every department at The Metropolitan Museum of Art.

Each department is a museum unto its own, representing one of the world's finest collections in its field. The first floor alone houses Greek and Roman Art; Egyptian Art; Arts of Africa, Oceania, and the Americas; Arms and Armor; European Sculpture and Decorative Arts; Modern Art; and the Robert Lehman Collection. The course is truly a user-friendly guide to a mammoth institution that has amassed astonishing treasures.

This course is part of The Great Courses® series of noncredit recorded college lectures by The Teaching Company®. More than 300 courses taught by award-winning professors on a wide array of subjects in the sciences and the liberal arts are available now on our website.

Order Today!
Offer Expires Friday, January 29, 2010

Museum Masterpieces:
The Metropolitan Museum of Art
Course No.7510
24 lectures (30 minutes/lecture)

DVDs ~~$254.95~~ NOW $69.95

+ $10 Shipping, Processing, and Lifetime Satisfaction Guarantee

Priority Code: 33715

Museum Masterpieces: The Metropolitan Museum of Art

Taught by Richard Brettell, The University of Texas at Dallas

Lecture Titles

1. The Making of the Museum
2. The Art of Ancient Greece and Rome
3. Ancient Egyptian Art
4. Asian Art
5. The Ancient Near East and Islamic Art
6. European Painting I—The Renaissance
7. European Painting II—16th–17th Centuries
8. European Painting III—18th Century
9. European Painting IV—19th Century
10. Drawings and Prints
11. Photographs
12. European Decorative Arts
13. European Sculpture
14. The Arts of Africa and Oceania
15. The Ancient New World
16. Musical Instruments and Arms and Armor
17. Costumes and Textiles
18. American Art—1650–1865
19. American Art—1865–1900
20. 20th-Century Art—Before World War II
21. 20th-Century Art—After World War II
22. The Robert Lehman Collection—1400–1800
23. The Robert Lehman Collection—1800–1960
24. The People of the Museum

ACT NOW!

1-800-TEACH-12

www.TEACH12.com/8st

THE TEACHING COMPANY®
The Joy of Lifelong Learning Every Day™
GREAT PROFESSORS, GREAT COURSES, GREAT VALUE GUARANTEED.™

Shopping Maul

The first rule of holiday shopping: There are no rules **BY CAITLIN KELLY**

ELBOWS OUT, adrenaline pumping, they line up by the thousands, aquiver with the thrill of the chase. Their focus is absolute, their aim impeccable, their arms powerful, their speed impressive. Impede or deter them at your peril.

Shopping, no matter the state of the economy, remains our true national sport—not football, basketball or baseball, which come with referees, umpires, fines and actual rules. This is cage match fighting without the cage. The playing season is short but intense, kicking off with Black Friday and reaching a fever pitch on December 24—the all-star playoffs.

As a former saber fencer who has worked the past two years as a sales associate at a posh mall, I've lived the heart-pounding, sweaty-palmed challenge of ferocious competition. At least on the fencing strip, I had a metal helmet and a sharp, pointed weapon to protect myself. Competitors who behaved badly were penalized and tossed out.

At the mall: I wish.

When we roll open our store's heavy glass door each morning, we inhale our last calm, deep breath of the day. By late evening, we've scraped fresh gum off the counters, picked up half-eaten pretzels from the floor and refolded sweaters so many times our hands are raw and swollen.

Remember *The Birds*, Alfred Hitchcock's classic 1963 horror film? Every time Tippi Hedren stepped outdoors, a cloud of birds enveloped her, hellbent on pecking her to death.

That's pretty much life on our floor:

"Miss!"

"Can you help . . . "

"I need . . . "

"Do you have this in red?"

"I'm looking for . . . "

A lot of shoppers seem to think that we're carnival barkers endowed with the ability to instantly guess their height and weight. I once had a mother ask me to sell her three coats for her children—ages 3, 5 and 7—without a clue as to what sizes they wore. As we race to and from the stockrooms, trying to memorize a dozen requests, we pray that the items the shoppers so desperately need are actually in the stockroom (usually sitting high atop a shelf or stuffed within an unmarked box). And after we've finished our scavenger hunt and come up empty, we hear the question that is repeated endlessly in my nightmares: "Could you check again?"

The shoppers we dread most are the upscale customers who enter the store as if they were being carried on a sedan chair. These are the people whose daily lives are soothed by an army of the deferential: nannies, maids, au pairs, interns, assistants, employees, drivers and personal trainers. One of them plopped her $5,000 designer handbag on my counter and barked, "Keep an eye on that, would you?" They and their children expect a level of obeisance that's positively pre-revolutionary. The French Revolution, that is.

And, while we welcome eager French and Spanish tourists bearing *beaucoup d'euros*, we really hate it when they insist on standing thisclose to us. We get it—it's a European thing. But, really, we can hear them just fine from several feet away.

Maybe the day will come when somebody will publish a formal rulebook for shoppers and install penalty boxes throughout the mall. But, until then, here are a couple of simple guidelines to follow: First, try to remember why you're here. To buy something. Not to thrust your self-importance into the faces of salespeople earning $9 an hour with no commission.

And when we utter the word "No"—as in "No, that doesn't come in your size"—please try not to take it personally. Behave like the seasoned competitors we know you are. On the soccer field, a searing kick to the shin is inevitable. Hockey players expect to get slammed into the boards. And shortstops know a bad bounce can blacken their eye.

After all, it's just a game.

CAITLIN KELLY *lives in Tarrytown, New York, blogs at trueslant.com and is writing a memoir about her retail days.*

ERIC PALMA